



THE ACQUISITION OF ARGUMENT STRUCTURE  
ALTERNATIONS BY VIETNAMESE LEARNERS OF ENGLISH

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## ABSTRACT

This thesis investigated the acquisition of argument structure alternations, namely the dative alternation, the benefactive alternation, and the locative alternation, by Vietnamese learners of English. The population sample involved 72 adult participants divided into 2 groups: an experimental group of 36 Vietnamese learners of English and a control group of 36 native English speakers used as a benchmark for cross-group comparisons. The language learners were categorised into an upper-intermediate group built on their Michigan test scores. To be qualified for the study, all learners had to pass a Word-Meaning Matching Task.

The first experiment examined the acquisition of the DA with respect to native-like competence, markedness, and the morphological constraint. The findings suggested that the learners were found to achieve native-like grammar regarding all dative structures except illicit DODCs. The other constraints such as markedness, L1 transfer, and the morphological constraint were recognised to accommodate the findings. The learners' performance was in agreement with the case assignment (Stowell, 1981), Schachter's (1992) Transfer Hypothesis, the FT-FA Hypothesis (Schwartz & Sprouse, 1996), the learning input, or syntactic overgeneralisations.

The second experiment dealt with the acquisition of the BA. The pooled data from the two groups showed that the learners obtained native-like performance with respect to benefactive structures, excluding the licit DOBCs. The markedness constraint was found to have a great influence on the learners' judgments of the benefactive in which the PBCs were judged significantly better than the DOBCs. This constraint was supported by the FT-FA Hypothesis, the Transfer Hypothesis, and case assignment. Also, L1 ratings were found to have a substantial influence on both syntactic patterns of Verb Type 2. As for the morphological constraint, unlike the first experiment, the illicit DOBCs were rated at higher levels of acceptability than the licit DOBCs. This asymmetry of the DOBCs was expounded by semantic verb classes, the learners' input, FT-FA Hypothesis, as well as overgeneralisations. In respect to the relationship between the dative and benefactive alternations, while the asymmetries of the PDCs and PBCs were proved by the positive transfer, the asymmetries of the DODCs and DOBCs had their roots in the preposition transfer and semantic features.

The last experiment looked at the LA with reference to language competence, language transfer, and knowledge of locative structures. The findings disclosed that the learners attained native-like performance on Type 2 FOCs and Type 3 GOCs. Nevertheless, they could not distinguish the three verb classes, that is, alternating class, figure class, and ground class. The FT-FA Hypothesis validated this acquisition. Plus, the NRRs and overgeneralisations also exerted an influence on the learners' incomplete acquisition of locative structures.

## **CERTIFICATION OF THESIS**

This Thesis is entirely the work of Dung Duc Chau except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Principal Supervisor: Professor Shirley O'Neill

Associate Supervisor: Dr. Chris Dann

Student and supervisors' signatures of endorsement are held at the University.

## OTHER PUBLICATIONS

- Nguyen, H. T. L., Austin, G., & **Chau, D. D.** (2018). Treatment recommendation in Vietnamese medical consultations. *PEOPLE: International Journal of Social Sciences*, 3(3), 1010-1027. <https://doi.org/10.20319/pijss.2018.33.155173>
  
- Nguyen, H. T. L., Austin, G., **Chau, D. D.**, Nguyen, H. Q., Nguyen, K. H. B., & Duong, M. T. (2018). Eliciting patients' health concerns in consulting rooms and wards in Vietnamese public hospitals. *International Journal of Applied Linguistics & English Literature*, 7(2), 121-133. <https://doi.org/10.7575/aiac.ijalel.v.7n.2p.121>
  
- Nguyen, H. T. L., & **Chau, D. D.** (2020). Opening sequences of Vietnamese police-driver traffic enforcement interactions. *Theory & Practice in Language Studies*, 10(5), 481-491. <http://dx.doi.org/10.17507/tpls.1005.02>

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## ABBREVIATIONS

BRR	Broad-Range Rule
BA	Benefactive Alternation
DA	Dative Alternation
DOC	Double-Object Construction
DOBC	Double-Object Benefactive Construction
DODC	Double-Object Dative Construction
EFL	English as a Foreign Language
ESL	English as a Second Language
FOC	Figure-Object Construction
GOC	Ground-Object Construction
L1	First Language
L2	Second Language
LA	Locative Alternation
N	Noun
NP	Noun Phrase
NP-BEN	Noun Phrase Benefactive
NRR	Narrow Range Rule
NS	Native Speaker
OB-BEN	Oblique Benefactive
PBC	Prepositional Benefactive Construction
PDC	Prepositional Dative Construction
PP	Prepositional Phrase
S	Subject
SLA	Second language acquisition
UG	Universal Grammar
V	Verb
VLE	Vietnamese Learner of English

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## **CHAPTER 1: INTRODUCTION**

### **1.1 Overview**

English is a dominant foreign language that has been being taught in Vietnamese schools for decades. Yet, Vietnamese students have to face considerable challenges in the course of learning English due to a number of reasons. This research thus targets to uncover some learnability problems that Vietnamese learners are encountering in learning English, and what factors are behind this.

The chapter falls into six sections. Section 1.2 highlights some general research problems. In Section 1.3, I set out statements and goals of this research, followed by its significance and scope in Section 1.4. Section 1.5 then offers some underlying theories (the theoretical conceptual framework) that are then thoroughly discussed in Chapter 2. The thesis structure in Section 1.6 concludes this chapter.

### **1.2 Research background**

Second language acquisition (SLA) is considered a subpart under the larger umbrella term “cognitive science” (Gass, 1993, p. 99). It is commonly acknowledged that SLA involves knowledge in a variety of disciplines, such as anthropology, linguistics, psychology, sociology, and pedagogy, to name a few (Aljumah, 2020; Larsen-Freeman & Long, 2014; Long, 1990; Mitchell & Myles, 2004). Following Gass (1993), SLA contributions in these fields enable us to understand the nature of language and human cognition. In particular, SLA is a study of what is learned and what is not learned of a second language (L2); this is also concerned with theories which explain why learners are often challenged through experiencing differences between their L1 and L2 performance.

It is generally held that SLA is concerned with the process and study of how people acquire an L2, as its name implies. One such illustration is the study of how Filipinos learn English as an L2 in the Philippines. However, SLA is a concept used to refer to the learning of any non-primary language beyond an established native language, so this can consist of a third, fourth, or fifth language acquired or learned by someone (Gass & Selinker, 2008; Larsen-Freeman & Long, 2014; VanPatten & Williams 2015a). Seen in this light, the present research investigates the application of the SLA principles in the context of Vietnamese learners of English (VLE) as a foreign

language (EFL). Additionally, studies in this field seek to inform the complexities of SLA with a view to improving knowledge in the field, which then can better inform second language pedagogy.

Regardless of context, Neupane (2019) draws attention to a major dichotomy between native language acquisition and SLA. He points out that while native speakers<sup>1</sup> (NSs) start without any language when they begin to learn their first language (L1), such that their grasp of the language is gradually formulated, EFL learners, on the other hand, approach their L2 after having already acquired a set of L1 habits. Moreover, Slabakova (2019) also emphasises an additional well-known contrast between native language acquisition and SLA. She notes that the L1 acquisition is a uniform success in which children normally fully acquire their L1 grammar at about five or six years of age. Conversely, L2 learners produce varied attainments of the target grammar. As VanPatten and Williams (2015b, p. 11) note, this explains why the idiom “practice makes perfect” is not completely accurate in the case of SLA. Similarly, when a sentence structure of an L1 and L2 differs significantly, or learners need to understand an L2 language having tones that require discerning pitch, or they are unaware of the use of the definite and indefinite article, existing language learning is insufficient.

Many years ago, Vietnamese learners’ engagement with the target-language input (e.g., English) mainly occurred in formal educational settings. In this respect, their English was mainly facilitated and instructed by their language teachers through drills, instructions, or correct behaviours in classrooms (T. B. H. Nguyen, 2013). However, because of the economic globalisation, traditional learning and teaching approaches seem to be less and less dominated in recent years. That is, Vietnam is known as a mass tourism country, which has been attracting millions of foreign tourists annually (Lynn, 2020; Macrotrends, 2022). VLEs’ engagement with English has been thus extended to authentic interactions with foreigners. Additionally, the emergence of online social platforms (e.g., Facebook or YouTube) has led to the enhancement of learners’ exposure to English language through e-learning methods (e.g., smartphones, tablets, or online learning tools).

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<sup>1</sup> The term “native speaker” refers to a person who speaks a particular language as L1. For example, native speakers speak English as L1 in Australia.

Given Vietnam's education and economic goals for the nation and rising middle class (Lynn, 2020), this study's focus on the key challenge of English L2 acquisition to better enable teachers and learners to bolster performance has the potential to contribute. Specifically, this research addresses the issue of the structure of arguments, since for L1 speakers of Vietnamese, the acquisition of argument structures in using English L2 is particularly challenging but is necessary to master given that these structures are part and parcel of language use in both academic and social environment.

### **1.3 Statements and goals of the research**

The argument structure between languages may have a vast range of variation, such that it is a core element in several approaches to language, and has captured much attention from researchers (Bachrach et al., 2014; Du Bois, 2003; Hermas, 2020; Sung & Kim, 2020). In the extant literature, therefore, the argument-structure alternations have long been a focal issue in SLA research of all varieties in different languages. Specifically, following a recent corpus analysis by Sung and Kim (2020), Korean EFL learners have produced greater verbal usage of ditransitive syntax compared with resultative constructions.

The impetus for this thesis came from the prevalence of such argument structure alternations, as there exist around fifty distinct syntactic frames in English (Yi & Koenig, 2016). Syntactically, there are more than 40 types of alternations, as listed in Levin's (1993) study. More importantly, it is acknowledged that the constructions denoting the transfer of entities between people present in all languages (Newman, 1996), and the locative constructions involve a wide range of verbs (Gropen et al., 1991; Levin, 1993; Levin & Hovav, 1991; Tomasello, 2005). For instance, following Levin (1993), there are approximately 360 dative verbs, 200 benefactive verbs, and more than 200 locative verbs.

This thesis aims to provide a better understanding of the acquisition of the three types of argument-structure alternations. Specifically, it seeks to illuminate (1) the dative alternation (DA), (2) the benefactive alternation (BA), and (3) the locative alternation (LA), through the conduct of three separate experiments. These are exemplified in (1.1) to (1.3), respectively.

### Experiment 1: DATIVE ALTERNATION

- (1.1)           a. Mary sent a letter to Tom.  
                  b. Mary sent Tom a letter.

### Experiment 2: BENEFACTIVE ALTERNATION

- (1.2)           a. Mary baked a cake for Tom.  
                  b. Mary baked Tom a cake.

### Experiment 3: LOCATIVE ALTERNATION

- (1.3)           a. John sprayed paint on the door.  
                  b. John sprayed the door with paint.

This study examines whether learners' acquisition of three types of argument-structure alternations is influenced by L1 transfer, overgeneralisations, markedness, and the morphological constraint by means of a grammaticality judgment task (GJT). The results are mainly interpreted with reference to markedness, Pinker's (2013) learnability theory, Full Transfer-Full Access Hypothesis (Schwartz & Sprouse, 1996), and Transfer Hypothesis (Schachter, 1992) since these are influential and relevant approaches for this research.

#### **1.4 The significance of the study and its scope**

This study has significant contributions in both pedagogical and L2 acquisition implications. Firstly, based on the research outcomes, EFL teachers will know what errors in argument structures their learners normally commit, and teachers, thus, can self-regulate their teaching methodologies or make some changes in the syllabus. Secondly, in terms of SLA perspective, this study will shed some new light on the matters of L1 transfer, and other constraints influencing L1 Vietnamese speakers' acquisition of three argument structures.

From a thorough review of literature, despite a number of existing experimental studies on the SLA of the selected alternations by learners from diverse language

backgrounds, three types of alternations as listed in (1.1) to (1.3) above have still been largely under-explored so far in the Vietnamese context. This research thus focuses exclusively on the DA, the BA, and the LA, accordingly.

There is a fact that the SLA process occurs in natural and untutored environment, whereas EFL learning activities predominantly take place within classrooms. In this thesis, acquisition is used as a superordinate term which is bounded in the sense of all settings (Larsen-Freeman & Long, 2014, p. 43).

This study follows a quantitative approach since the research looked at the formulation of experimental hypotheses. Experimental online tasks were designed in order to compare the performance of three types of alternations by EFL learners with that of Australian English L1 speakers in making judgements over multiple items on five-point Likert scales.

## **1.5 The theoretical conceptual framework**

This section is a representation of how the relevant devices are mapped out and how they are connected together within this research. In detail, the structure schemas are described in Section 1.5.1, followed by the presentation of argument structures and types of alternations in Sections 1.5.2 and 1.5.3, respectively.

### **1.5.1 Ditransitives and caused motion constructions**

Figure 1.1 below presents the generalizations of relations amongst English constructions. The topmost part of the diagram is the subject-predicate construction which is considered as the root of the remaining English constructions. The subclass of constructions is supposed to inherit all features of the upper level of constructions. For example, the transitive and intransitive constructions inherit all of the subject-predicate construction's properties.

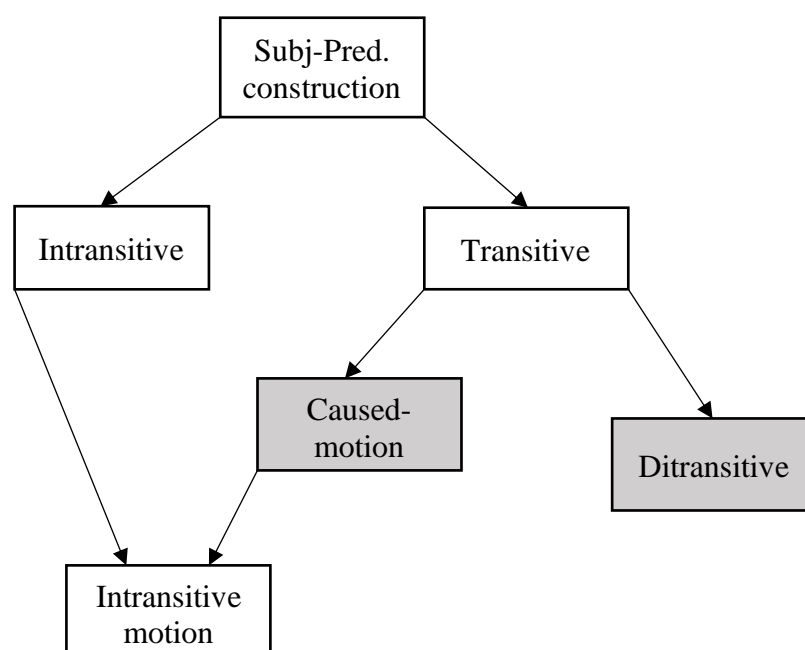
In this diagram, the ditransitives and causal motion constructions (shaded boxes) lie at the core of this study. The ditransitive syntactic pattern has a central sense "X causes Y to receive Z", as in *John gave Mary a book* or "X intends to cause Y to receive Z" as in *John baked Mary a cake* (Goldberg, 1995, p. 75). These constructions are associated with the datives and benefactives which are examined in Experiments 1 and 2, respectively. Regarding the cause-motion structure, its central meaning is "X causes Y to move Z" as in *Tim pushed the piano into the room* (Goldberg, 1995, p. 76), which is investigated in Experiment 3. The intransitive motion structure also



consists of another type of LA such as *the locusts are swarming in the back yard* vs. *the back yard is swarming with locusts*, but it is beyond the scope of this study.

**Figure 1.1**

Diagram of Generalizations across Constructions



*Note.* Reproduced from *Constructions: A Construction Grammar Approach to Argument Structure* (p. 109), by A. E. Goldberg, 1995, The University of Chicago Press. Copyright 1995 by The University of Chicago.

### 1.5.2 Mapping of argument structures

One of the major background theories formulating this thesis is the understanding of the argument structure and its representations. It is thus justifiable to make explicit some key notions such as predicates, arguments, and argument structures. First of all, verbs are predicates of events (Levin & Hovav, 2005), and arguments are associated with entities that are participating in the predicate relation. Hence, an argument structure defines the number of arguments that a predicate takes (Carnie, 2006), or it is “the relational semantics of participancy between nominal projections and predicative projections” (Ramchand, 2013, p. 307).

In English, most verbs (intransitives, transitives, or ditransitives) normally require from one argument, as in *she sighed*, to three arguments, as in *I sent him a message*; few verbs (tritransitives) describing transactions or wagers can take up to four arguments in maximum (Jackendoff, 2002), as in *I traded him a picture for the toy*. When describing arguments in a syntax, it is also important to distinguish the differences of an argument and an adjunct. Syntactically, the meaning of an argument is allocated to a verb, but an adjunct is not necessarily part of the verb's lexical entry (Thompson et al., 1995), as exemplified in (1.4).

- (1.4)           a. John sent his son to the hospital.  
                  b. John is working in the hospital.

In (1.4), the prepositional phrase (PP) *to the hospital* is semantically attached to the meaning of *send*, which denotes an end path (e.g., someone or somewhere) of the direct object. At the other extreme, *in the hospital* is a locative adjunct, and thus is not intrinsic to the verb's representation. Seen in this light, Carrier-Duncan (1985) states that the arguments can be categorised into inherent or noninherent ones on the basis of their roles in the syntax. The obligatory arguments have inherent roles in the syntax, and the meanings of these arguments must be attached to the meanings of their verbs. Consider (1.5).

- (1.5)           a. John sent a book to Mary.  
                  b. John sent a book to Mary for Tom.

The argument *Mary*, for instance, in (1.5a) is inherent because the verb *send* cannot generate a full meaning without the following PP, which denotes the destination of the movement of the direct object *a book*. Even when the *to*-phrase is eliminated, *send* still implies a goal per se, contextually. In contrast to the inherent argument, *for*-phrase in (1.5b) is defined as noninherent argument since the grammaticality of (1.5b) is not violated without *for*-phrase.

### 1.5.2.1 Thematic roles

We cannot discuss semantics of argument structures without describing the notion of thematic roles (thematic relations), being regarded as an important feature of argument structures. The thematic roles are also known as “theta roles ( $\theta$ -roles)” in generative grammar (Chomsky, 1988), “part of the level of conceptual structure, not part of syntax” (Jackendoff, 1990, p. 46), and play the role of relating arguments of a verb to the meaning of the verb (Carlson & Tanenhaus, 1988). In another way, thematic roles can be defined by some formulas like “X causes Y to go Z”, as in *John sent a letter to Mary*, which can classify the participants of events in semantic theory (Parsons, 1995; Pinker, 2013). In this section, I will not in any great detail describe the thematic roles of arguments (see Bachrach et al., 2014; Carnie, 2006; Jackendoff, 1990; Kim & Sells, 2008; MacDonald et al., 1994; Parsons, 1995; Payne, 1997; Rissman & Majid, 2019; Talmy, 2000; Thompson et al., 1995; Williams, 1994, for more discussion). Rather, I will touch on some key arguments that are most relevant to this study.

(i) The AGENT is an initiator or a doer that carries out actions of the verb. An Agent, which is known as an external argument, is often a subject. However, if the subject is an Experiencer in a sentence without a Theme, it is assigned to the internal argument. There are differences between internal arguments and external arguments of a verb. The former are the subcategorised complements of the verbs (e.g., direct objects, indirect objects), whereas the latter are normally the Agents (White, 2003). In (1.6a-b), *Mary* plays a role of an Agent. The illustrated thematic roles from (1.6) to (1.15) are in bold.

(1.6) a. **Mary** baked a cake yesterday.

b. The cake was baked by **Mary**.

(ii) The THEME is an entity that undergoes the action of the verb. In (1.7a-b), *the book* is a Theme.

(1.7) a. My mother read **the book** yesterday.

b. **The book** was read by my mother yesterday.

(iii) The PATIENT is an entity that undergoes a change or an act. The Patient and the Theme are sometimes used interchangeably. In (1.8), *the fence* can be semantically known as either *Theme* or *Patient*.

(1.8) I painted **the fence**.

(iv) The GOAL is a location towards which an entity moves. In (1.9), *New York* is a Goal. The Goal may also be associated with abstract motion, as in (1.9b).

(1.9) a. Bridget travelled to **New York**.  
b. Bridget has transferred all assets to **her daughter**.

(v) The RECIPIENT and the Goal have similar thematic roles. In (1.10), *Mary* could also be construed as a Goal (Carrier-Duncan, 1985; MacDonald et al., 1994). Yet, the Recipient is typically characterised in terms of either transfer or a change of possession, and the Goal is canonically associated with the endpoint of a spatial path (Carnie, 2006; Rissman & Majid, 2019).

(1.10) a. John gave a book to **Mary**.  
b. John gave **Mary** a book.

(vi) The LOCATION is a place where the action takes places. The Location is often preceded by some prepositions such as *at*, *in*, or *on*, as *at home* in (1.11).

(1.11) Kylie was sleeping **at home**.

(vii) The INSTRUMENT refers to an inanimate entity that an Agent employs to perform an event. The Instrument can be matched on to either a PP as in (1.12a), or the subject position as in (1.12b).

(1.12) a. A thief has broken the window with **a stone**.  
b. **A stone** has broken the window.

(viii) The BENEFICIARY is the one that is benefited by an event. A Beneficiary is normally headed by *for*, as in (1.13).

(1.13) Alex baked a cake for **her husband**.

(ix) The FIGURE is a moving object or located with respect to another object. The GROUND has a stationary setting with respect to which the Figure's path, site, or orientation is characterised. (Talmy, 2000, p. 312). In (1.14-1.15), while *paint* and *the book* function as Figures, *the door* and *the desk* function as Grounds.

(1.14) John sprayed **paint** onto **the door**.

(1.15) **The book** lay on **the desk**.

The aforementioned category of semantic roles is not exhaustive, and the list is going on. In an enormous body of literature, valency refers to the number of arguments attributed to a verb (Carnie, 2006; Kulikov et al., 2006). Unergative verbs like *run*, *talk*, or *resign*, for instance, have a valency of one (one external argument), and transitive verbs like *play*, *read*, or *meet* have a valency of two (one internal argument and one external argument). Nevertheless, the valency assigned to a certain verb can change due to the grammatical construction of that verb. That is, verbs like *run* or *break* have only one argument when they are intransitive (e.g., *she is running* or *the vase broke*), but one more argument will be added to the syntaxes when they have a transitive use (e.g., *she is running her own company*, or *she broke the vase*). Furthermore, the modification to the syntax also triggers the valency change. *Cut*, to exemplify, is intuitively indicated to have two arguments, as in *she cut a cake*, taking one Agent and one Theme (or Patient). Syntactically, inserting one PP like *with a knife* will result in an increment in the number of arguments of this sentence (Williams, 1994). To summarise the point, Table 1.1 below illustrates some examples of thematic roles.

**Table 1.1***Role List of Arguments*

Predicates	Arguments
rain, snow	[-]
think, cry, punt	[Agent]
explode, go off, fall	[Theme]
paint, cut, clean	[Agent, (Theme)]
dodge, tear	[Agent, Theme]
be, come, remain	[Theme, (Goal indirect)]
please	[Theme, Goal]
swim, walk, cycle	[Agent, (Goal indirect)]
feel, hear, see	[Goal, Theme]
give ('donate')	[Agent, (Theme), ( Goal indirect )]
give, throw, send	[Agent, Theme, (Goal indirect)]
put, lay	[Agent, Theme, Goal indirect ]

*Note.* Reproduced from *Sentence Accents and Argument Structure* (p. 84), by C. Gussenhoven, 2012, De Gruyter Mouton. Copyright 1992 by Walter de Gruyter & Co.

Table 1.1 depicts some examples of predicates accompanied with their arguments. The arguments in parentheses are optional. Following Roca's argument elaboration, *rain* or *snow* is said to have zero valency (or a valent verbs). Other verbs like *think* or *cry* require one argument which is assigned the role of subject of that verb. In the same vein, the verb *give* requires three arguments: an Agent, a Theme, and a Goal.

### 1.5.2.2 Argument-structure alternations

Argument structure alternations, also known as multiple argument realisation, are represented by pairs of sentences with the same verb (Ramchand, 2013; Levin &

Hovav, 2005). Some important types of alternations are related to the swap of direct objects and indirect objects, as in (1.16) and (1.17).

- (1.16)        a. I sent a parcel to my sister.  
               b. I sent my sister a parcel.

- (1.17)        a. I bought a new shirt for my wife.  
               b. I bought my wife a new shirt.

Some other syntactic alternations can be expressed with two-argument verbs, where a direct object in a variant becomes an object of one PP headed by some prepositions like *at*, *on*, or *against* (conative alternation).

- (1.18)        a. Mary pushed the luggage.  
               b. Mary pushed at/on/against the luggage.

Another alternation like “causative/inchoative alternation” does not follow the rule above as each pattern has different numbers of arguments. Verbs of change of state or change of position normally undergo this type of alternation, as in (1.19) and (1.20).

- (1.19)        a. The mirror broke.  
               b. The kid broke the mirror.

- (1.20)        a. The ball rolled.  
               b. The kid rolled the ball.

To make an alternation happen, one of the necessary conditions is that all the affected phrases should be arguments of the verb (Pinker, 2013, p. 46). That is why (1.21a) does not entail (1.21b) since the *for*-phrase is clearly an adjunct but not an argument.

- (1.21)           a. I read books for fun.  
                   b. \*I read fun books.

Apart from this rule, for each specific argument variant, there also have some specific factors governing the alternations. For example, the morphological constraint, or the semantic constraint (e.g., broad-range rules) by Pinker (2013) specifies what types of dative, benefactive, or locative verbs alternate.

### 1.5.3 Types of alternations

In this section, I will present three types of alternations discussed by Hanks (2013, pp. 174-176). His study addresses three ways in which regular patterns of usage in a language alternate with one another: lexical alternations, semantic-type alternations, and syntactic alternations. In general, alternations reflect differences in focus rather than differences in overall clause meaning, and may be found in some words, not in any words.

#### 1.5.3.1 Lexical alternations

This type of alternation occurs when two propositions have overall similar meanings by using the synonymous lexicon. Consider (1.22) (from Hanks, 2013, p. 174).

- (1.22)           a. A drowning man will clutch at a straw.  
                   b. A drowning man will grasp at a straw.

Given that *clutch at* and *grasp at* are synonymous with each other, (1.22b) is regarded as a phraseological pattern of (1.22a) in which significant changes of semantics between them are absent. Many lexical alternations can be found in idioms, expressions, or catchphrases. For instance, the following pairs of expressions quoted from Moon (1998, pp. 161-162) have equivalent meanings: “fan the fire of something/fuel the flame”, “shake in one’s boots/quake in one’s boots”, or “scare the life out of someone/frighten the life out of someone”. However, Hanks (2013) and Moon (1998) further add that these examples sometimes leave different connotations. That is, *clutch* is connotationally construed as expressing a feeling of slightly greater



desperation than *grasp*; or *fanning* and *fuelling* have different cognitive images; or in *fan the flames (of something)*, *something* normally refers to a socio-political one (e.g., bigotry, racism, or extremism). Nevertheless, regardless of these divergent connotations, my realisation is that little difference is present in the overall meaning of items within pairs, and they can be interchangeably used in most circumstances.

### 1.5.3.2 Semantic-type alternations

Hanks (2013) defines semantic-type alternations as “regular variation between two or more of the lexical sets that populate a specific clause role in relation to a target lexical item, with a change in focus or emphasis rather than a change in the essential meaning of the event” (p. 177). Consider (1.23), as quoted from Hanks (2013, p. 178).

- (1.23)            a. Doctors treating Michael Gibson....  
                      b. Doctors treating Michael Gibson’s cancer...

The readings (1.23a-b) alternate each other in terms of a so-called semantic-type alternation. Following this approach, a term denoting a medical condition (cancer) and a term denoting a medical patient as the direct object of *treat* can alternate each other. Hanks argues that *Michael* is a Patient in a contextual role assigned by the events in which he involved, and this is implied by the verb *treat* in (1.23a). Similar alternations apply to *Human Group* (e.g., *universities*, *societies*, or *companies*) and *Human* since some human being is performing an action on behalf of the institution or human group mentioned.

### 1.5.3.3 Syntactic alternations

Syntactic alternations are discussed by Levin (1993) who has proposed over 70 syntactic alternations of English verbs in her study. Few of them include: transitivity alternations (e.g., subject of intransitive alternations, unexpressed object alternations, conative alternation, preposition drop alternations), argument-structure alternations (e.g., dative alternation, benefactive alternation, locative alternation), and oblique subject alternations (e.g., time subject alternation, natural force subject alternation, instrument subject alternation). Some are exemplified from (1.24) to (1.26).

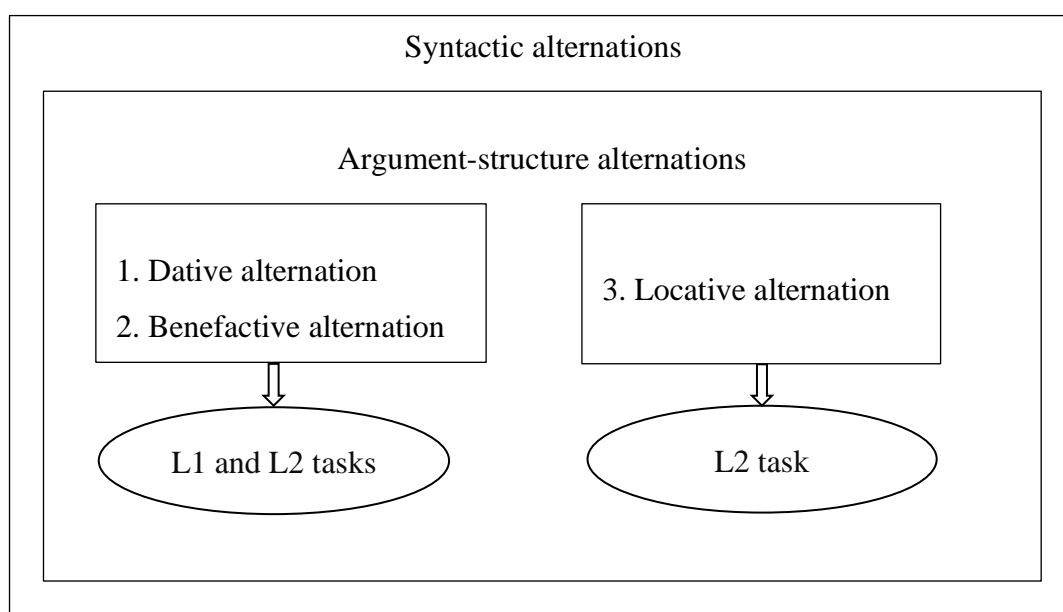
- (1.24) Conative alternation  
 a. John cut the cake.  
 b. John cut at the cake.
- (1.25) Preposition drop alternations  
 a. John climbed up the tree.  
 b. John climbed the tree.
- (1.26) Natural force subject alternation  
 a. Tim dried the towel in the sun.  
 b. The sun dried the towel.

As described earlier, given that the argument-structure alternations are nested within syntactic alternations, the DA, the BA, and the LA are therefore syntactically bound.

To investigate the acquisition of these types of alternations, both L1 and L2 tasks were employed for Experiments 1 and 2, whereas, L1 task was not administered for the Experiment 3 (i.e., the LA). Below is an overall view of how these constructions were examined in the thesis, which is illustrated by the conceptual framework in Figure 1.2.

**Figure 1.2**

*Conceptual Framework for the Acquisition of Argument-Structure Alternations*



## **1.6 Thesis structure**

This thesis is organised into five chapters. The subsequent chapters are described as follows.

Chapter 2 provides deep insights into relevant theoretical background of the DA, the BA, and the LA, particularly focusing on the syntax and semantics of each alternation. It then discusses the theories of the language transfer. Subsequently, the factors governing the alternations for each construction are discussed, followed by a description of the corresponding structures in Vietnamese. I also review previous key SLA studies in the field and point out some limitations and gaps of these studies so as to justify the present research.

Chapter 3 lays out the research methodology employed in the thesis. This chapter presents the research questions and the research design and methodology used for the three experiments. It also provides the hypotheses that underpin the study and inform the outcomes of the research questions.

Chapter 4 concerns the findings and discussion. In this chapter, I evaluate the extent to which the research questions have been answered, and whether the hypotheses are rejected or not. I also suggest some mechanism that may play a role in explaining the acquisition of VLEs' argument-structure alternations, and discuss how the findings relate to previous studies, and whether these outcomes can be implemented into the existing theories of SLA. I also address the limitations of the research.

Chapter 5 concludes the thesis. It restates the findings of all three experiments in brief, and summarises the findings in response to the research questions. The chapter outlines the research contribution to knowledge regarding both pedagogical and SLA implications as well as making further suggestions for prospective SLA studies to continue the research.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Overview**

In the first part, Section 2.2, key SLA theories are reviewed. In particular, Transfer Hypothesis (Schachter, 1992) and Full Transfer-Full Access Hypothesis (Schwartz & Sprouse, 1996) are presented since these models are necessarily employed in order to underpin the theory and support the discussion of the findings in Chapter 4 later. Following this, the thesis' three experiments, i.e., the DA, the BA, and the LA, are presented in three separate sections. Within each experiment, I particularly focus on Pinker's (2013) learnability (e.g., broad-range rules, narrow-range rules) governing the argument-structure alternations, and Levin's (1993) verb classes. Also, universal-based markedness is discussed to explain the order of acquisition in the discussion section.

### **2.2 Early SLA theories**

When it comes to SLA, it cannot go without mentioning the language transfer (or crosslinguistic influence), which is considered as one of the key factors contributing to the developmental path of an L2. Language transfer takes place when learners rely on what they have known about their L1 and then apply to their L2 performance (Arabski, 2006; VanPatten & Williams, 2015b). Evidence demonstrates that L1 transfer cannot radically change the route of L2 acquirers' acquisition but an influence on their progress (Ortega, 2014). Learners' learning of L2 is greatly influenced by L1 regardless of whether the two languages are related or not (Schachter, 1992). The transfer is normally supposed to lead to either positive or negative consequences (or both at the same time), being known as positive transfer or negative transfer, respectively. When two languages (e.g., L1 and L2) share some features in common, it is assumed that a positive transfer can happen. In this context, learners find it less difficult to acquire L2 since L1 has a beneficial effect on L2 acquisition. Conversely, negative transfer (known as interference) may take place if two languages have some unrelated properties, resulting in hindrances or errors in the learners' performance (Arabski, 2006; Ringbom, 1987; VanPatten & Benati, 2015; VanPatten & Williams, 2015b).

In the field of SLA, the role of L1 transfer has been widely used and debated

for decades. A number of studies target the influence of L1, and provide evidence that learners' performance is influenced by their native language (Ellis, 1994; Gass & Selinker, 2008; Jarvis & Pavlenko, 2008; Schwartz & Sprouse, 1996). Some extant studies draw a conclusion that L1 transfer has a significant effect on various respects such as phonology, morphology, syntax, vocabulary, or pragmatics (e.g., Benson, 2002; Ringbom, 2007). One such exemplar of negative transfer in terms of phonology is that the VLEs are known to have difficulty pronouncing certain final consonants in English (e.g., /l/ in /kən'trəʊl/ *control*) because this consonant does not occur in this position in the L1 (Osburne, 1996, p. 169). However, it should be noted that negative transfer is attributed from 5% to 25% of learners' grammatical errors since this is not the sole factor to deter their performance (Bley-Vroman, 1990). Following Arabski (2006), varied factors are responsible for successful language transfer such as: language distance (the degree of difference between two languages), the stage of interlanguage development (transfer is very likely to occur for beginners and then gradually decreases for advanced learners), language properties (pronunciation and forms, but not idiomatic expressions, are susceptible to transfer), age of learners (children are not likely to be influenced by L1 transfer).

From an SLA perspective, there are many constraints both hindering and facilitating the L2 process. Hence, various theories and approaches have been formulated with an attempt to give an answer of how SLA is shaped. Some popular and early representatives of this line can be counted as Universal Grammar<sup>2</sup> (UG) theory (Chomsky, 1965), Transfer to Somewhere Principle (Andersen, 1983), Transfer Hypothesis (Schachter, 1992), Full Transfer/Full Access Hypothesis (Schwartz and Sprouse, 1996), Transfer to Nowhere Principle (Kellerman, 1995), Transfer of Frequency (Larsen-Freeman, 2011), or Global Semantic Anchor Hypothesis (Yi & Koenig, 2016).

Perhaps amongst the theories going all out for explaining the influence of L1, the "Transfer Hypothesis", which was put forth by Schachter (1992), has projected an inclusive picture of syntactic relations between two languages. Unlike the other

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<sup>2</sup> Universal Grammar refers to the deep-seated regularities (or innate constraints) of the human mind, which is omitted from the grammar itself and does not have to be learnt (Chomsky, 1965, p. 6; Chomsky, 1986, p. 3).

theories, this hypothesis rests on an assumption that transfer is not a process but a misnamed phenomenon, and that learners have formulated different hypotheses over the target language according to their own knowledge. Central to this view is that “the learner infers from previous knowledge the domain within the universe from which the solution to the current target language problem will be taken. Then, the learner samples hypotheses from that domain” (Schachter, 1992, p. 38). Following Schachter’s hypothesis-testing framework, “domain” here is an internal organization of sentences (e.g., clause types, phrase types or lexical categories) and it is categorised into many types according to sizes and shapes: larger and smaller domains (e.g., the domain of main verbs is bigger than that of main verbs taking complements), cross-cutting domains (e.g., the domains of concrete and abstract cross-cut by ones of common and proper noun), and simple/ complex domains (e.g., conjunctive domains [A and B and C]). Another term is “universe” which refers to a set of hypotheses, being known as learners’ knowledge in L1 and L2. Following Schachter’s view, this hypothesis has three possible outcomes, as follows.

(i) Outcome 1: Learners may choose the wrong domain. This is because the input (known as the linguistic forms) has provided conflicting signs. Another possibility of this mistaken choice is that they assume that the pre-established domains of target language and native language are relevant. This case is an instance of a transfer.

(ii) Outcome 2: Both correct domains and the correct hypothesis have been chosen by learners. This is because learners either have good analysis of the input or have recognised the identity of structures of both languages. The latter reason is known as the case of a positive transfer.

(iii) Outcome 3: Learners may choose the correct domain but the wrong hypothesis. The first reason is because they have had a partly mistaken analysis of the input. The second reason is that although they could have correctly recognised the relevant domains between the two languages, they have applied the wrong hypothesis for the target language. The second case is known as transfer error.

Of the three outcomes, my attention is drawn to outcomes 2 and 3 because all participants were required to choose the same domains by default in this study. According to this, two options should be brought up: learners’ choice of correct domain and correct hypothesis (positive transfer) and learners’ choice of correct domain but wrong hypothesis (negative transfer). Hence, different choices of

hypotheses normally depend on the similarity or dissimilarity of L1 and L2. When two languages are related to each other, learners are supposed to arrive at a correct hypothesis. Otherwise, the wrong hypothesis is formulated as a result of two unrelated languages.

Schachter's theory was proved by numerous SLA studies (Gad, 2018; Kautzsch, 2010; Tang et al., 2021; Yip, 1995). She, for instance, reported an example of 75 Arabic speakers learning English passive voice in terms of negative transfer. The data show that the learners produced two typical errors as in (2.1) (Schachter, 1992, p. 41).

- (2.1)           a. Oil was discover in the 19th century.  
                  b. This theatre built with different design from the others.

In this context, the learners chose the same domain (the passive construction) but the hypothesis (to mark the passive) was different amongst them. As has been realised, some of them did not add the past participle form of the main verb as in (2.1a), or some of them did not include a tensed form of *be* as in (2.1b).

The second relevant approach that I introduce in this section is the Full transfer-Full Access Hypothesis (FT-FA) formulated by Schwartz and Sprouse (1994, 1996). According to the FT-FA model, the whole of L1 grammar (excluding the phonetic matrices of lexical/ morphological items) is attributed to the initial state of L2 acquisition (Full Transfer), and L2 learners have full access to UG to restructure the L1 system if needed (Full Access). The hypothesis was supported by a case study of the development of word order and nominative case conducted by Schwartz and Sprouse (1994). These experimenters tested the acquisition of German by collecting spontaneous production data of an adult Turkish speaker, Cevdet, over a period of 26 months. The study primarily focused on the verb position as this diverges in the two languages. At the earliest stages, Cevdet exhibited finite-verb fronting as a carry-over from L1 Turkish. At the later stages, his grammar was distinct from that of German, and this phenomenon was subject to the fossilization. Schwartz and Sprouse concluded that L1 transfer was clear-cut.

## 2.3 Experiment 1: The dative alternation

### 2.3.1 General learnability problems

The first experiment scrutinises the acquisition of the English DA by VLEs. Although English is generally considered to have relatively fixed word order, post-verbal constituents actually have flexible orderings (Wasow & Arnold, 2003). These generate variants which may be either synonymous with, or different in meaning to, the original sentence. The DA is one transformation of this kind, and it is the focus of this first experiment.

English has many types of argument alternations, and the DA is one of the structures that cause learnability problems for not only L2 learners but also L1 acquirers of English as well. The linguists, for decades, have remained engrossed with the main question of whether speakers are in a dilemma over using either noun phrase – noun phrase (NP-NP) patterns or NP-PP patterns (Gerwin, 2014). This is because not all dative verbs can alternate (e.g., *Kevin illustrated his project to the manager* cf. *\*Kevin illustrated the manager his project*) (Baker, 1979; White, 2003), or there are circumstances in which an alternating dative verb cannot alternate.

Many ditransitive verbs occur in two constructions like *John showed/told Mary this problem*. Many other similar verbs, however, cannot occur in another similar structure like *\*John explained/expressed Mary this problem*. This binary choice poses a syntactic learnability, known as “Baker’s Paradox”, which has received much attention in the linguistics literature (Baker, 1979; Bowerman, 1987; Pinker, 2013). The general aims of this study are to determine whether or not the VLEs have acquired native-like competence<sup>3</sup>, or otherwise what factors (i.e., L1 transfer, markedness, morphological constraint) have hindered VLEs’ acquisition of the dative.

### 2.3.2 Syntactic and semantic properties of English dative structures

The English dative structures can be exemplified in (2.2) through (2.4).

- (2.2)           a. John sent a letter to Mary. (PDC)  
                  b. John sent Mary a letter. (DODC)

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<sup>3</sup> In linguistics, native-like competence refers to EFL/ESL learner’s language performance that resembles that of a native speaker.



- (2.3)           a. Jane introduced the new plan to William. (PDC)  
                   b. \*Jane introduced William the new plan<sup>4</sup>. (DODC)
- (2.4)           a. \*Jack reported the accident to Sophie. (PDC)  
                   b. Jack reported Sophie the accident. (DODC)

The three-argument verbs in the above examples, i.e., *send*, *introduce*, *report*, are called dative verbs. They differ from each other with respect to the possible orderings in which the post-verbal constituents can occur. In (2.2) to (2.4), the (a)-forms NP-PP are called prepositional dative constructions (henceforth PDCs), and the (b)-forms NP-NP are called double-object dative construction (henceforth DODCs). Verbs occurring in both variants like *send* are known as alternating dative verbs. Conversely, verbs like *introduce* or *report* that are solely compatible with one of these patterns in counterexamples (2.3) and (2.4), respectively, are called nonalternating dative verbs. When the two object-linked arguments switch their positions, the DA<sup>5</sup> occurs (Beavers & Koontz-Garboden, 2020; Gerwin, 2014). Intuitively, a syntactic contrast in (2.2) is that the verb is followed by a direct object *a letter*, and by an indirect object *Mary* marked by the preposition *to* in (2.2a). However, the direct object and the indirect object swap their positions in (2.2b), and two dative variants in (2.2) have a transformational affinity.

As already mentioned in Chapter 1, on the semantic level, *John* is Agent, *a letter* is Theme, and *Mary* is Recipient as in (2.2). The preposition *to* used in PDCs covers a wide range of argument types including recipients or spatial goals (inanimate recipients), and other phrasal verbs (e.g., *conform to*, *submit to*, *surrender to*, or *yield to*) are followed by goal/recipient-unrelated arguments (Hovav & Levin, 2008, pp. 142-143). It is normally assumed that argument structures can be predicted from their semantics. When a new semantic structure is altered, it is automatically attached with a new realisation of arguments (Pinker, 2013), which reflects the prevalent uniform

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<sup>4</sup> As a widely-accepted convention in linguistics, a sentence initially marked with an asterisk (\*) or a question mark (?) is ungrammatical or dubious, respectively.

<sup>5</sup> This type of alternation is also known as “dative shift”/ “dative shifting” (Givón, 2001; Larson, 1988), ditransitives (Gerwin, 2014), or “dative movement” (Malchukov et al., 2010).

multiple meaning approach (Hovav & Levin, 2008; Levin, 2008) where each distinct dative variant is claimed to generate different semantics. That is, there is a semantic representation of a movement of an entity transferred from an agent to a recipient in (2.2a), while the second meaning in (2.2b), on the other hand, involves causation of a possessive state, causing a recipient to have a possession of an entity (Beavers, 2010; Goldsmith, 1980; Harley & Jung, 2015; Hovav & Levin, 2008; Kallmeyer & Osswald, 2012).

While some ditransitive verbs (e.g., *give*, *pass*) entail real possession in DODCs, other verbs (e.g., *offer*, *throw*) only result in “prospective possession” (Harley & Jung, 2015, p. 708). Similarly, Pinker (2013) adds that the sense of possession here need not be literal. Some verbs of communication (e.g., *ask* or *tell*), for example, are claimed to generate the metaphorical possessions, as in *Peter asked Daisy some questions* or *John told Emma the information*. In a similar manner, the possessive transfer could be either physical (*give*, *pass*, *lend*, *sell*), abstract (*offer*, *promise*), or mental (*show*, *tell*, *teach*) (Napoli, 2018). The recipient must be then animate and be a prospective possessor to have possession of the transferred item from the agent (Blevins & Yoshinaga, 1992; Goldsmith, 1980; Green, 1974; Pinker, 2013), as illustrated in (2.5).

- (2.5)           a. \*He sent New York a package.  
                  b. He sent his friend a package.

On the first reading, (2.5a) is ruled out as New York, obviously, is inanimate and cannot be a possessor of the package. There are, however, a few contexts in which the recipient is not necessarily animate in DODCs, as in (2.6) (Oh, 2010, p. 410).

- (2.6)           a. We gave the house a fresh coat of paint.  
                  b. We gave the house a new roof.

The concepts of possessions<sup>6</sup> could be broadly construed from possession of

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<sup>6</sup> It has been said that there are four types of possessions: inalienable possession (*John gave Bill a black eye*), alienable possession (*John gave Bill a car*), control possession (*John gave Bill the car for the weekend*), and focus possession (*John gave Bill the windows to clean*) (Beavers et al., 2009, p. 110).

information (e.g., *read*, *show*, and *tell*) in (2.7) to *future possession* (e.g., *offer*, *promise*, *guarantee*) in (2.8) (Krifka, 1999; Levin, 1993; Pinker, 2013).

- (2.7)           a. John showed this house to Mary.  
                  b. John showed Mary this house.

- (2.8)           a. John promised an appointment to Mary.  
                  b. John promised Mary an appointment.

Yet, some arguments have come up, indicating that not all verb classes denote a caused movement in PDCs and caused possession in DODCs. For example, *give* class is involved with only caused possession in both dative variants (Beavers, 2011; Kallmeyer & Osswald, 2012). In like manner, Hovav and Levin (2008, p. 132) further proposes a verb-sensitive approach of three verb subclasses whose argument realisation options depend on their own lexical semantics of the verb. Following their views, *give* class and *throw*- and *send* classes are not construed in the same way. That is, the former is solely associated with a caused possession meaning, and the latter encodes both caused motion and caused possession in two variants, as illustrated in Table 2.1.

**Table 2.1**

*Verb Sensitive Approach of Give- Type Verbs and Throw- and Send-Type Verbs*

Verb subclass	PDCs	DODCs
<i>give</i> -type verbs	caused possession	caused possession
<i>send</i> -type verbs	caused motion	caused possession
<i>throw</i> -type verbs		

Hovav and Levin state that PDCs can be construed with either caused possession or caused motion, subject to verb classes. They reason that *give*-type verbs (e.g., *give*, *hand*, *lend*, *loan*) lack a conceptual path constituent in PDCs since their core meaning

is canonically associated with caused possession. Consider (2.9).

- (2.9)           a. John gave the letter to his friend/ \*New York.  
                   b. \*Where did John give the letter?  
                   c. To whom did John give the letter?

The PP in (2.9a) is incompatible with an inanimate recipient, and lacks a locational or directional meaning. In (2.9b), the question imitated with *where* is therefore ungrammatical. In contrast, this does not happen to *send*- and *throw*-type verbs (e.g., *mail, send, ship, kick, throw*), as illustrated in (2.10) and (2.11).

- (2.10)           a. John sent the letter to his friend/New York.  
                   b. To whom did John send the letter?  
                   c. Where did John send the letter?

- (2.11)           a. John threw the ball to his friend/the wall.  
                   b. To whom did John throw the ball?  
                   c. Where did John throw the ball?

With respect to syntactic behaviors of dative verbs, Randall (1987) suggests that alternating verbs normally require two obligatory post-verbal arguments, while nonalternating verbs take either two arguments or only a direct object, as illustrated in (2.12) for two different verb classes: *give*-type verbs (e.g., *bring, give, lend, send, tell*) and *deliver*-type verbs (e.g., *contribute, deliver, explain, recite, report*).

- (2.12)           a. \*Peter gave/sent/brought a book.  
                   b. Peter delivered/explained/reported the news.

Semantically, dative verbs like *send* or *give* denote the transference of an item, and an object and a receiver are mandatorily required in the syntax in tandem. However, in some special contexts, (2.12a) could be well-formed when a missing recipient can be contextually understood (Carrier-Duncan, 1985; Randall, 1987). Still, there are few cases of alternating verbs occurring in the syntax in which the recipient is not mandatory, as in *Peter threw a ball*. Williams (1974) argues that, unlike *send*, it is

totally possible to throw an object without a receiver. Some idiomatic expressions with *give* also do not need a recipient argument, such as *she gave a speech* or *she lent a hand* (Gerwin, 2014, p. 8; Randall, 1987, p. 15). Other alternating verbs like *pay* allow the absence of either recipient or theme, as in (2.13) (Hawkins, 1987, p. 31).

- (2.13)        a. Peter paid Mary money.  
               b. Peter paid money.  
               c. Peter paid Mary.

### 2.3.3 English dative verbs

It is opined that verbs can be categorised into a certain syntax depending on their semantics (Gerwin, 2014; Oehrle, 1976). To put it another way, the same syntactic behaviour can be predicted from sets of verbs with similar semantic aspects. *Send*-type verbs (*mail, send, ship*), for example, include alternating verbs, while verbs of fulfilling (*credit, entrust, trust*) are compatible with PDCs only (Levin, 1993). Thus, in the literature, dative verbs were normally categorised into different classes predicated upon their associated semantics (Green, 1974; Levin, 1993; Pinker 2013). Notwithstanding the syntax-semantics correlation, verbs based on such classification do not always encode the same syntax (Gruber, 1965). A case in point is *send* which is a candidate of alternating group, while its synonymous verb like *submit* is merely compatible with PDCs.

In Green's (1974, pp. 110-123) study, dative verbs fell into five classes: *bring*-type class<sup>7</sup> (*bring, take, pull*), *give*-type class (*give, advance, award*), *send*-type class (*send, fling, forward*), *radio*-type class (*radio, wire, cable*), and *promise*-type class (*promise, guarantee, permit*). Likewise, Pinker's (2013, pp. 139-140) study listed 13 verb subclasses which were grouped into three main categories: (i) alternating subclasses sensitive to the morphological constraint (e.g., *give, send, mail*), (ii) alternating subclasses insensitive to the morphological constraint (e.g., *recommend*,

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<sup>7</sup> In her study, Green (1974) labelled *to*-class from 1 to 5. The verb representative used in each verb type is for a mnemonic purpose only. This does not indicate that this verb epitomises the semantics of its subclass. This approach will be applied to all verb subclasses presented in three experiments (Sections 2.3.3, 2.4.4, 2.5.3).

*telegraph, telephone*), and (iii) nondativizable subclasses that are cognitively compatible with the change of possession (e.g., *pull, push, select*). In the current experiment, verbs and labels were employed on the basis of Levin's (1993, pp. 45-48) classification, following the way that there were two main classes (alternating vs. nonalternating classes).

### 2.3.3.1 Alternating verbs

This section includes verbs appearing in both variants, being classified into eight subclasses.

(a) *give-type* verbs: e.g., *feed, give, lease, lend, loan, pass, and pay*.

- (2.14)           a. John leased his house to the tourists.  
                  b. John leased the tourists his house.

(b) *Verbs of future having*: e.g., *advance, allocate, allot, assign, award*.

- (2.15)           a. The teacher assigned the homework to the students.  
                  b. The teacher assigned the students the homework.

(c) *Bring and take*: e.g., *bring, take*.

- (2.16)           a. She brought a cup of tea to John.  
                  b. She brought John a cup of tea.

(d) *Send-type* verbs: e.g., *forward, hand, mail, post, send, ship*.

- (2.17)           a. I forwarded an email to my teacher.  
                  b. I forwarded my teacher an email.

(e) *Slide-type* verbs: e.g., *slide, bounce, float, roll*.

- (2.18)           a. I bounced the ball to my son.  
                  b. I bounced my son the ball.

(f) *Carry-type verbs*: e.g., *carry, drag, heft, hoist*.

- (2.19)           a. She carried a suitcase to him.  
                  b. She carried him a suitcase.

(g) *Throw-type verbs*: e.g., *bash, bat, bunt, catapult, chuck, flick, and throw*.

- (2.20)           a. She threw the ball to her daughter.  
                  b. She threw her daughter the ball.

(h) *Verbs of transfer of a message*: e.g., *ask, read, show, teach, and tell*.

- (2.21)           a. Jenny asked the question to her dad.  
                  b. Jenny asked her dad the question.

However, there is an exemption that *tell* cannot be used in PDCs when a clause is embedded (Krifka, 1999), as in (2.22).

- (2.22)           a. \*John told to Mary that there was a storm.  
                  b. John told Mary that there was a storm.

(i) *Verbs of instrument of communication*: e.g., *cable, e-mail, fax, sign, telecast*.

- (2.23)           a. Kellie faxed a message to her manager.  
                  b. Kellie faxed her manager a message.

### 2.3.3.2 Nonalternating verbs

While some dative verbs can appear in both PDCs and DODCs, some only appear in either of these, namely PDC-only verbs and DODC-only verbs.

(i) *PDC-only verbs*: This verb group are only compatible with PDCs. There are five nonalternating verb subclasses.

(a) Latinate verbs: e.g., *address, broadcast, contribute, convey, delegate, donate, explain, and recite*.

- (2.24)           a. Adam addressed his application to the company manager.  
                   b. \*Adam addressed the company manager his application.

(b) Say-type verbs: e.g., *admit, allege, announce, communicate, confess, mention, propose, say, state*.

- (2.25)           a. I admitted the mistake to my friend.  
                   b. \*I admitted my friend the mistake.

(c) Verbs of manner of speaking: e.g., *babble, bark, bawl, cry, groan, grumble, roar, stammer*.

- (2.26)           a. The baby babbled the nonsense words to his mum.  
                   b. \*The baby babbled his mum the nonsense words.

(d) Verbs of putting with a specified direction: e.g., *drop, hoist, lift, lower, raise*.

- (2.27)           a. Samara lifted the box to her daughter.  
                   b. \*Samara lifted her daughter the box.

(e) Verbs of fulfilling: e.g., *credit, entrust, furnish, issue, provide, supply*.

- (2.28)           a. The charity always provides assistance to the poor.  
                   b. \*The charity always provides the poor assistance.

(ii) DODC-only verbs: This verb group consists of five nonalternating verb subclasses, which are only compatible with DODCs.

(a) *Bill*-type verbs: e.g., *bet, bill, charge, fine, overcharge, save, tax, tip*.



- (2.29)           a. The shop charged half price to everyone.  
                   b. The shop charged everyone half price.

(b) *Appoint-type* verbs: e.g., *acknowledge, adopt, crown, designate, nominate, reckon, want*.

- (2.30)           a. \*Everyone nominated the best actor to him.  
                   b. Everyone nominated him the best actor.

(c) *Dub-type* verbs: e.g., *anoint, call, dub, make, pronounce, style, and vote*.

- (2.31)           a. \*I called the best singer to her.  
                   b. I called her the best singer.

(d) *Declare-type* verbs: e.g., *adjudge, believe, confess, prove, think, warrant*.

- (2.32)           a. \*I confessed the truth to him.  
                   b. I confessed him the truth.

(e) *Others*: *ask, cost, deny, envy, forbid, forgive, guarantee, refuse*.

- (2.33)           a. \*The director refused the request to the staff members.  
                   b. The director refused the staff members the request.

### 2.3.4 Factors affecting acceptability

The choice of PDCs over DODCs and vice versa is governed by varied circumstances. Language-external accounts (e.g., diachronic, stylistic, and regional variation) could be blamed for an alternation of one dative verb (Gerwin, 2014). However, this section only touches on the language-internal accounts licensing the acceptability of the DA such as the discourse constraint, the weight of objects, or syntactic status.

### 2.3.4.1 Discourse constraint

The information status in many languages has an influence on the choice of construction (Arnold et al., 2000). More specifically, if a dative verb is used in an answer to a question, the preferred information ordering (i.e., new vs. given) in the answer depends on the structure of the question. Let us examine the following examples (2.34) and (2.35) (adapted from Callies & Szczesniak, 2008, p. 168).

(2.34) Who did Peter send a gift to?

- a. Peter sent a gift to Mary.
- b. Peter sent Mary a gift.

(2.35) What did Peter send to Mary?

- a. Peter sent Mary a gift.
- b. Peter sent a gift to Mary.

Given information normally precedes new information. In the question-answer pair in (2.34), the desired information is the identity of the recipient, and so this question elicits a PDC response. Thus, in the response, *a gift* is the given information and *Mary* is the new information. By contrast, the information expected in the response to the question in (2.35) is the theme. Accordingly, *Mary* is the given information and *a gift* is the new information. This is why (a) is normally more acceptable than (b) in each of (2.34) and (2.35) (Arnold et al., 2000; Chang, 2004; Kaiser, 2002). Experimentally, this preference is confirmed in Marefat's (2005) study in which both L1 participants (i.e., high-intermediate and advanced level) and NSs consistently rated the given-new ordered responses higher than the new-given ordered ones in the discourse contexts.

### 2.3.4.2 Heavy NP shift

Another similar factor affecting the DA is called *heavy NP shift*, which is defined as a type of transformation moving a heavy NP to the end of the sentence (Kimball, 1973). The heaviness here is considered as the numbers of words. In a recent study, Motamedynia and colleagues (2016) found that, like NSs of English, when the direct object NP is lengthened by adding extra linguistic information, advanced learners of English accepted heavy NP shift structures more readily than the ones with the basic word order. Consider example (2.36) (Larson, 1988, p. 347).

- (2.36)           a. Max sent the longest letter anyone had ever seen to me.  
                   b. Max sent to me the longest letter anyone had ever seen.

Additionally, this factor can make a nonalternating verb, in some exceptional contexts, function like an alternating verb, as a quotation from Wasow (1997, p. 84) in (2.37).

- (2.37)           But no one could begrudge its splendid facilities to a city which lost 16,000 of Armenia's 25,000 dead on December 7, 1988, and was half-ruined by the earthquake.

Wasow and many other linguists (Levin, 1993, p. 47; Pinker, 2013, p. 130; Stowell, 1981, p. 320) all contend that *begrudge* is not a member of the alternating dative verb class, only occurring in DODCs. However, when the heaviness would make DODCs with *begrudge* sound awkward, it is possible to use this verb in PDCs.

#### 2.3.4.3 The possession constraint

The possession constraint (or semantic constraint) is one of the well-known factors affecting the DA. As discussed, the English DODCs generate a possession relation, and the first object in DODCs must be a prospective possessor, as in (2.38).

- (2.38)           a. Peter sent a gift to Paris.  
                   b. \*Peter sent Paris a gift.

As can be seen from (2.38b), the DODC is not possible with *send* since *Paris* is a spatial goal and it is an inanimate recipient which cannot come into possession of an entity. However, (2.38b) can be definitely considered as a well-formed expression if *Paris* is metonymically presupposed to be a human organization or a group of people who are located in Paris (Ambridge et al., 2012; Beavers & Koontz-Garboden, 2020; Harley, 2002; Harley & Miyagawa, 2017; Levin, 1993).

Some other situations in which the animate recipient is not allowed in DODCs still exist. Consider (2.39) quoted from Levin (2008, pp. 17-18).

- (2.39)           a. The teacher sent the children/the note to the principal.  
                   b. The teacher sent the principal \*the children/the note.

The verb *send* can take an animate theme *the children* in PDCs, but not in DODCs. This is because the caused motion schema is possible in PDCs and the possessive relation between the theme and the recipient is not possible in DODCs. Semantically, the principal cannot possess the children. By contrast, if the theme is inanimate, i.e., *the note*, alternation between the two constructions is possible. Nevertheless, Levin (2008) adds that there are occasional cases in which a relation of possession exists between an animate theme and a recipient in a DODC like “I sent her my best graduate student” (p. 18).

Back to (2.38), the inanimate NPs like *Paris* cannot function as a possessor of an alienable relation. However, this happens in the case of an inalienable relation such as *we gave the house a fresh coat of paint* or *we gave the house a new roof* (Oh, 2010, p. 410). There are circumstances in which the use of an inanimate theme also has an effect on the acceptability of DA, as exemplified in (2.40) from Davies (1994, p. 62).

- (2.40)           a. I owe five bucks/this example to Joe Smith.  
                   b. I owe Joe Smith five bucks/\*this example.

Following Davies, the DODC is felicitous only if the recipient is a possessor. In (2.40), the subject *Joe Smith* will become the owner of *five bucks* on receiving the money, but he cannot become the possessor of *this example* in any physical sense. The DODC is thus malformed when there is no real entity to be possessed. To add more, the possession constraint helps clarify the contrast in (2.41).

- (2.41)           a. She drove the car to Chicago.  
                   b. \*She drove Chicago the car.

While driving a car to Chicago does not lead the city to possess *the car* in (2.41a), this activity violates the change-of-possession requirement in (2.41b) (Pinker, 2013). On the other hand, illustrations of (2.38a) and (2.41a) are not subject to the possession constraint, as they are normally concerned with movement change.

#### 2.3.4.4 Idiom expressions

There are a few instances in which DODCs violate the animacy constraint. These are cases of idioms in which no actual possession involves. Consider the following expressions in (2.42) and (2.43) (Hall, 1965, pp. 60-61).

(2.42) He gave the house a new coat of paint.

(2.43) He gave the problem his full attention.

Or consider the similar illustrations in (2.44) and (2.45) from Green (1974, p. 75).

(2.44) a. \*Measles germs give measles to you  
b. Measles germs give you measles

(2.45) a. \*Bill gave a little pinch to Sue  
b. Bill gave Sue a little pinch

In (2.44), the contrast between (a) and (b) might be that the measles is not caused to go from the measles germs to someone in (2.44a), while someone is caused to have measles in (2.44b). In PDCs generally, a directed movement along a physical path is encoded by the PP complement, so the theme should be a thing that is physically transferable (Oh, 2006). Therefore, (a)-forms are ruled out inasmuch as *measles* and *pinch* are definitely not physical entities that can be transferred. Following the theoretical grammar, phrases such as *give a pinch* or *give a headache* are called the collocational or idiomatic link between the main verb and the post-verbal constituent. These expressions are normally restricted to either DODCs (e.g., *give someone advice/a headache/the creeps*) or PDCs (e.g., *bring something to life/to an end, send someone to the devil*) (Bruening, 2010; Callies & Szczesniak, 2008; Goldberg, 1995; Hovav & Levin, 2008; Oh, 2010; Wasow & Arnold, 2003). Nevertheless, some idiomatic expressions are still licit in the prepositional patterns (see Bresnan et al., 2007).

### 2.3.4.5 Other factors

Besides the aforementioned constraints, work by De Marneffe et al. (2012, p. 29) also indicates that English PDCs are preferred if the recipient is a lexical NP, animate and indefinite, as is true of *a man* in (2.46). Conversely, if the theme is a lexical noun, inanimate or indefinite, DODCs are likely to be produced more often, as a case of *some money* in (2.47).

- (2.46)        a. I lent those to a man. (more probable)  
              b. I lent a man those. (less probable)

- (2.47)        a. I lent some money to me. (less probable)  
              b. I lent me some money. (more probable)

The DODCs are ungrammatical in some cases such as the inanimate subjects as in (2.48), or a co-occurrence of directional phrases in (2.49).

- (2.48)        a. The rain brought disaster to the farmers. (Green, 1974, p. 104)  
              b. \*The rain brought the farmers disaster.

- (2.49)        a. John threw the ball down the field to Max. (Oehrle, 1976, p. 226)  
              b. \*John threw Max the ball down the field.

One factor affecting the DA is the pronominal restriction. If the direct object is an unstressed definite pronoun, DODCs cannot be formed (Baker, 1997; Oehrle, 1976). Another reason is that the prepositional pattern is appropriate when the recipient is new and the theme is given (Tomasello, 2005), as in (2.50).

- (2.50)        a. Peter sent it to Mary.  
              b. \*Peter sent Mary it.

The focal prominence occurring on either the theme or the recipient can be attributed to the choice of patterns, as in (2.51) (Langacker, 2009, p. 113)

- (2.51)           a. Jack teaches American history to immigrant children.  
                   b. Jack teaches immigrant children American history.

In the spirit of Langacker's (2009) study, the choice between (2.51a) and (2.51b) depends on whether the knowledge itself (i.e., American history) or the recipients of this knowledge (i.e., immigrant children) is emphasised, respectively. He adds that, in terms of semantic roles, the theme (i.e., *American history*) moves to the recipient in (2.51a), while the recipient apprehends or controls the theme in (2.51b).

Reflexives account for the ununiform transformation over the range of the DA. Consider the following contrasts, as can be seen from (2.52) to (2.54) (Oehrle, 1976, p. 256).

- (2.52)           a. Fraust sold him to the Devil.  
                   b. \*Fraust sold the Devil himself.
- (2.53)           a. \*John gave a present to himself.  
                   b. John gave himself a present.
- (2.54)           a. He's been telling stories to himself.  
                   b. He's been telling himself stories.

### 2.3.5 Constraints on the dative alternation in English

In this section, four constraints, being known to have an influence on the DA, are discussed. I will have a look at some proposed theories with the aim of explaining the DA in English. These include the BRRs (or possession constraint), the NRRs (verbal semantics constraints), morphological constraints, and markedness.

#### 2.3.5.1 Broad-range rules

From the previous discussion, we have seen that not all dative verbs in English (e.g., *pull*, *carry*) can alternate. One well-known and influential semantic constraint on whether or not a particular dative verb is able to alternate is a set of BRRs, known as thematic cores (Pinker, 2013) or "lexical semantic templates" (Levin & Hovav, 1998,

p. 252). In accordance with this theory, the DA can be seen as an operation that takes a verb with a thematic core containing the structure “X causes Y to go Z”, as in *Peter gave a gift to Mary*, and converts it to a verb containing the structure “X causes Z to have Y”, as in *Peter gave Mary a gift*. With this in mind, it is claimed that if any dative verb is to undergo the alternation, the verb must entail a change of location of the theme in PDCs. On the other hand, this verb will denote prospective possession when DODCs are used. Consider (2.55).

- (2.55)           a. Peter gave a gift to Mary.  
                   b. Peter gave Mary a gift.

In (2.55a), there is a transfer of location of *a gift* from *Peter* to *Mary*. This physical motion, however, does not exist in (2.55b). Instead, this structure entails a change of possession of the gift from Peter to Mary. Note also that the preposition *to* in the former intensifies the path interpretation, indicating the terminal point of the theme along this path. However, the latter does not convey this meaning due to the absence of the preposition *to* (Tomioka & Kim, 2017). The verb *give* fulfils all of these thematic cores, so it alternates.

### 2.3.5.2 Narrow-range rules

The BRRs by themselves are necessary but insufficient for a dative verb to be able to alternate, as not all dative verbs that are cognitively consistent with the BRRs can do this (Gropen et al., 1989; Pinker, 2013). For example, some verbs such as *pull* are cognitively construable as resulting in a change of possession, but they are not compatible with the double object form. To solve this problem, Gropen and colleagues (1989) pick out narrow conflation classes which are simply the set of verbs that are similar to a verb heard to alternate. A dative NRR, therefore, would be a version of the dative rule which is confined to this class of similar verbs. The dative verb subclasses that have NRRs applying to them are represented in Table 2.2 (Gropen et al., 1989, p. 244).



**Table 2.2***Narrow Sets of Dative Verbs*

Subclass <sup>8</sup>	Sample verbs
Alternating	
giving	give, pass, hand
instantaneous causation of ballistic motion	throw, toss, kick
sending	send, mail, ship
motion in a specified direction	bring, take
future having	offer, promise, leave
type of communicated message	tell, show, teach
instrument communication	radio, telephone, fax
Nonalternating	
fulfilling	present, credit, entrust
accompanied motion	pull, lift
manner of speaking	shout, scream, whisper
communication of propositions	say, assert, question

While the BRRs relate to thematic core structure, the NRRs refer to more detailed aspects of semantics such as “instantaneous causation of ballistic motion”, or “communication of propositions” as described in Table 2.2. The NRRs explain why some verb classes can alternate and others cannot. Since the DODC involves an actor acting on a recipient and causing them to possess something, verb subclasses which suggest that the action inherently involves the possessor in some direct fashion would be most likely to alternate. For example, some verbs such as *throw*, *toss*, *kick* can cause someone to possess an object by means of immediately imparting force to it similar to ballistic motion. However, the action of some other verbs such as *pull* and *push* can be initiated without having the receiver in mind, and can have an ever-changing goal throughout their duration. These contrasting verb types are exemplified in (2.56).

<sup>8</sup> In this Table, there are three more subclasses (i.e., verbs of creation, verbs of obtaining, and verbs of choosing), which belong to benefactive verb subclasses. For the relevant theory, I will discuss them in Section 2.4.

- (2.56)           a. I threw/ pushed the ball to her  
                   b. I threw/ \*pushed her the ball

### 2.3.5.3 Morphological constraint

Besides the BRRs and NRRs discussed above, there is also a lexical restriction on the DODCs, being known as Latinate constraint, which puts further restrictions on some particular verbs belonging to narrow classes of NRRs (Pinker 2013; Whong-Barr & Schwartz, 2002). Following this, dativizable verbs tend to have native (i.e., Germanic), not Latinate, stems due to the history of English (Green, 1974; Oehrle, 1976; Pinker, 2013; Stowell, 1981). A number of native verbs (e.g., *drive*, *stir*, *wash*) are, however, only compatible with the NP-PP pattern (Mazurkewich & White, 1984). There is a tendency that most verbs of Latinate origin that are compatible with PDCs cannot be found in DODCs (Levin, 1993). Latinate verbs are ones which are formed from any combination of a fixed set of stems, plus a fixed set of prefixes such as *re-*, *de-*, *in-*, *con-*, *trans-* (Aronoff, 1976, as cited in Pinker, 2013, p. 55; Randall, 1980), as can be seen in (2.57) and (2.58) (Pinker, 2013, p. 53).

- (2.57)           a. John gave / donated / presented a painting to the museum.  
                   b. John gave / \*donated / \*presented the museum a painting.

- (2.58)           a. Bill told / reported / explained the story to them.  
                   b. Bill told / \*reported / \*explained them the story.

The reason for the contrast in each of (2.57) and (2.58) is that Latinate verbs were borrowed from French in the 14th and 15th centuries, but these verbs only allowed PDCs in the source language. When the verb was borrowed into English, the preposition *to* (the translation of *à* in French) was used to mark the recipient argument. By contrast, native verbs are compatible with DODCs (Davies, 1994; Levin, 1993; Oehrle, 1976). Pinker further adds that most native stems are monosyllabic, but if polysyllabic, the first syllable is stressed. In fact, Latinate verbs that have been assimilated to the native stress pattern do generally alternate such as *promise* and *offer*, as in (2.59), so they may be considered to be a native stem (Green, 1974). These verbs

are polysyllabic and the first syllable is stressed. Conversely, verbs such as *recommend* or *describe* cannot alternate as in (2.60) because the first syllable does not receive stress. However, semantically, there is an exception that verbs of future (e.g., *allot*, *assign*, *bequeath*) are insensitive to the morphological constraint prohibiting Latinate verbs as in (2.61) (Pinker, 2013, p. 253).

- (2.59)        a. John promised some money to his dad.  
                  b. John promised his dad some money.
- (2.60)        a. John recommended/ described this book to his friend.  
                  b. \*John recommended/ described his friend this book.
- (2.61)        a. The teacher allotted some assignments to his students.  
                  b. The teacher allotted his students some assignments

#### 2.3.5.4 Markedness

Markedness is defined according to varied approaches. One typological sense is that features presenting in most languages are unmarked and those that are specific to a particular language are marked (Berent, 2017; Katsufuji, 2000; Sawyer, 1995). In many languages, markedness has been found in a number of key areas of morphology, phonology and syntax (Ortega, 2014). Some empirical studies in typological markedness can be counted as Eckman (1977), Katsufuji (2000) or Wolfe-Quintero (1992). For example, Eckman (1977) exemplifies that in some languages (e.g., Korean), only voiceless obstruent exists while other languages (e.g., English) have both voiced and voiceless obstruents. However, we cannot find any language that only has only voiced obstruent phonemes. Hence, voiced-voiceless alternation happens as in *tag* ‘day’ and *tage* ‘days’ in German (Eckman, 1977, p. 317). Other examples come from the existence of passive voice with or without agents in some languages. Languages like Arabic, Greek, or Persian have passive sentences without agents (e.g., *the door was closed*) but do not have this form with the agents (e.g., *the door was closed by the janitor*) (Eckman, 1977, p. 321). Other languages like English, French, or Japanese have both these passive forms. It can be concluded that the presence of voiceless obstruents or passives with agents implies the presence of voice obstruents, or passives without agents, respectively. In this case, voiced obstruents are more

marked than voiceless obstruents and passives with agents are more marked than those without agents, according to the above definition. In the same vein, Ortega (2014) claims that voiced stops as /b/, /d/ and /g/ in *tab*, *seed*, and *bag* are more marked than voiceless as /p/, /t/ and /k/ in *tap*, *seat* and *back* because all languages have voiceless stops, but not all languages have voiced ones (p. 37).

Another type of markedness is governed by UG. As such, this proposes that some features of a language are “core” and thus “unmarked”, whilst some other features are “peripheral” and “marked”. The unmarked features are therefore easier for learners to acquire in the absence of the evidence. Conversely, the marked ones require substantial evidence for learners to acquire (Chomsky, 1988). One example of syntactic constructions regarding the markedness was conducted by Haspelmath (2013) in which 189 out of 378 investigated languages, accounting for 50%, had the indirect object construction only. However, only 83 (22%) had the double-object form<sup>9</sup>. That is to say, the syntactic construction [NP-PP] has more productivity than the construction [NP-NP].

In this thesis, the UG-based markedness is used. Back to markedness in relation to dative structures, L2 learners normally find it difficult to acquire the DODC than the PDC. This order of difficulty reflects an aspect of UG. The marked form is the peripheral, restricted, less usual or somehow more complex structure, while the unmarked form is considered to be the normal form (Hawkins, 1987; Le Compagnon, 1984; Mazurkewich, 1984; 1985; Ortega, 2014; Rowlands, 2002; White, 1987). Consider (2.62).

- (2.62)           a. Paul gave a letter to Mary.  
                  b. Paul gave Mary a letter.

Given (2.62b), the DODC is considered marked due to case assignment which is about the issue of adjacency. According to this theory, an NP receiving case must be adjacent to a governing verb or preposition (Stowell, 1981). Following this, in (2.62a), no problem arises because *a letter* is next to the verb *give* and *Mary* is next to the preposition *to*. However, in (2.62b), it is not clear how the NP *Mary* gets its case. Other

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<sup>9</sup> The double-object form in this survey is not limited to DODCs because this was investigated in 189 languages.

markedness illustration comes from new-given order of information in contextualised DA. This ordering is considered marked because it might be found in few languages. By contrast, given-new information ordering is unmarked because this is more common and is found in many languages than the first order (Katsufuji, 2000). Her (2013, p. 54) therefore states that it is justifiable to derive the marked case of the double-object form morphologically from the indirect-object form, rather than vice versa. Rowlands (2002) adds that verbs appearing in the restricted form (i.e., DODCs) can also appear in the non-restricted form (i.e., PDCs). However, this does not happen in the opposite direction, as not all of the verbs appearing in the non-restricted form appear in the restricted form, as in each of (2.63) and (2.64).

- (2.63)           a. David donated some old clothes to the charity.  
                  b. \*David donated the charity some old clothes.

- (2.64)           a. Kevin explained the difficult question to Amy.  
                  b. \*Kevin explained Amy the difficult question.

Following the above discussion, the (a)-forms are considered to be unmarked, whereas (b)-forms are marked.

### 2.3.6 Vietnamese dative structures

In what follows, let us have first scrutiny on dative structures in Vietnamese. It goes without saying that, in order to determine how VLEs acquire the datives in English and whether L1 transfer exists within that acquisition, one should investigate the datives in L2 Vietnamese. Like English, Vietnamese ditransitive verbs also require a direct object and an indirect object in the syntax (Diep, 2014, p. 18). Following this approach, there are subclasses: verbs of giving and taking/receiving (*tặng* ‘present’, *đưa* ‘hand’, *gửi* ‘send’, *cho* ‘give’), verbs of insertion (*ấn* ‘push’, *nhét* ‘cram’, *thọc* ‘thrust’), and verbs of choosing (*chọn* ‘choose’, ‘select’, *gọi* ‘call’, *bầu* ‘elect’) (H. D. Nguyen, 1997, pp. 115-116). It has been realised that, at first glance, the ditransitive verbs classified by H. D. Nguyen (1976) are not as productive as their counterparts in English.

To see the cross-linguistic correlation of the dative, I will start off with *gửi* ‘send’, as in (2.65).

- (2.65) a. *Hùng đã gửi một bức thư đến/cho Hoa.*  
 Hung PST<sup>10</sup> send one CLA letter to/for Hoa  
 ‘Hung sent a letter to Hoa.’
- b. *Hùng đã gửi đến/cho Hoa một bức thư.*  
 Hung PST send to/for Hoa one CLA letter  
 ‘Hung sent Hoa a letter.’

In (2.65), *send* does have its equivalent verb that alternates in Vietnamese. Syntactically, we can use either *đến* ‘to’ or *cho* ‘for’ to illustrate the dative meaning in Vietnamese, or can use these two prepositions in tandem (i.e., *đến cho*), as in (2.66).

- (2.66) a. *Hùng đã gửi một bức thư đến cho Hoa.*  
 Hung PST send one CLA letter to for Hoa  
 ‘Hung sent a letter to Hoa.’
- b. *Hùng đã gửi đến cho Hoa một bức thư.*  
 Hung PST send to for Hoa one CLA letter  
 ‘Hung sent Hoa a letter.’

In (2.65) and (2.66), the prepositions *đến* ‘to’ or *cho* ‘for’ are not obligatory. In (2.65b) and (2.66b), if the prepositions are omitted, their syntaxes are still parallel to their counterparts in English. However, the absence of such prepositions may lead to some changes in the meaning of the sentence, as exemplified in (2.67).

- (2.67) a. *Nga gửi cho Phong tiền.*  
 Nga send for Phong money
- b. *Nga gửi Phong tiền.*  
 Nga send Phong money  
 ‘Nga sent Phong the money.’

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<sup>10</sup> Abbreviations are used in glossing Vietnamese examples: CLA: classifier, PL: plural, PST: past, RN: relator noun.

In (2.67a), there is a change of possession of property from Nga to Phong. However, (2.67b) can convey an additional meaning that Nga entrusted Phong with some money, and not as implying a change in property possession (H. D. Nguyen, 1976, p. 934).

Following Clark's (1977, p.6) point of view, *cho* 'to' used in (2.65) can be classified as a coverb, a goal locative case form *qua* 'across to', or an accusative case form (i.e., verbs followed by a dative case without any preposition), as in (2.68).

- (2.68) *Hùng đã gửi Hoa một bức thư.*  
 Hung PST send Hoa one CLA letter  
 'Hung sent Hoa a letter.'

We can realise that (2.66b) are synonymous to (2.68) even when the Vietnamese prepositions were omitted. In other contexts, *cho* can be classified as either a verb in *cho con tiền* (*give the child money*) or a preposition as in *gửi tiền cho con* (*send money to the child*) (H. D. Nguyen, 1997, p. 169). Semantically, *to* and *đến* both denote meanings of motion or path in English and Vietnamese, respectively. However, when *cho* is used, two interpretations can be generated: the same dative meaning expressed by *đến*, and the benefactive meaning. For the benefactive meaning in (2.65), both Vietnamese variants could be construed as *on behalf of Hoa*, *Hung sent a letter (to someone)* (this is further discussed in 2.4)

For these reasons, *cho* is claimed to be pretty ambiguous when it can be translated as either *to* or *for* in English, depending on whether a dative or a benefactive interpretation is felicitous in that particular discourse context. H. D. Nguyen (1976, p. 921) further states that the recipient in the Vietnamese structure can be only omitted if its counterpart in English is a benefactor, as illustrated in structure with *let* in (2.69).

- (2.69) a. *Để Hùng gửi một bức thư cho.*  
 let Hung send one CLA letter for  
 'Let Hung send a letter for (Hoa).'  
 b. *\*Để Hùng gửi một bức thư cho.*  
 let Hung send one CLA letter for  
 'Let Hung send a letter to Hoa.'

Some other English alternating verbs also have their counterparts which

alternate in Vietnamese (e.g., *đưa* ‘pass’, *nói* ‘tell’, *gửi* ‘ship’), as illustrated from (2.70) to (2.72).

(2.70) a. *Hoa đã đưa quyển sách đến/cho học-sinh cô-ấy.*  
 Hoa PST pass CLA book to student she  
 ‘Hoa passed a book to her student.’

b. *Hoa đã đưa đến/cho học-sinh cô-ấy quyển sách.*  
 Hoa PST pass to student she CLA book  
 ‘Hoa passed her student a book.’

(2.71) a. *Anh-ấy đã nói sự-thật đến/cho mẹ anh-ấy.*  
 he PST tell truth to mother he  
 ‘He told the truth to his mother.’

b. *Anh-ấy đã nói đến/cho mẹ anh-ấy sự-thật.*  
 he PST tell to mother he truth  
 ‘He told his mother the truth.’

(2.72) a. *Lan đã gửi một-số hành-lý đến/cho bố cô-ấy.*  
 Lan PST ship some luggage to father she  
 ‘She shipped some luggage to her father.’

b. *Lan đã gửi đến/cho bố cô-ấy một-số hành-lý.*  
 Lan PST ship to father she some luggage  
 ‘Lan shipped her father some luggage.’

Now, let us look at some other examples containing Vietnamese verbs whose correspondences in English do not alternate like *giải thích* ‘explain’, *trình bày* ‘express’ and *minh họa* ‘illustrate’, given from (2.73) to (2.75), respectively.

(2.73) a. *Quan đã giải-thích vấn-đề này cho Nga.*  
 Quan PST explain problem this to Nga  
 ‘Quan explained this problem to Nga.’

b. *Quan đã giải-thích cho Nga vấn-đề này.*  
 Quan PST explain to Nga problem this  
 ‘\*Quan explained Nga this problem.’



- (2.74) a. *Thanh đã trình-bày một-vài ý-kiến đến mẹ anh-ấy*  
 Thanh PST express some opinion to mother he  
 ‘Thanh expressed some opinions to his mother.’  
 b. *Thanh đã trình-bày đến mẹ anh-ấy một-vài ý kiến.*  
 Thanh PST express to mother he some opinion  
 ‘\*Thanh expressed his mother some opinions.’
- (2.75) a. *Cô-ấy đã minh-họa một-vài dự-án đến những khách-hàng.*  
 she PST illustrate some project to PL client  
 ‘She illustrated some projects to the clients.’  
 b. *Cô-ấy đã minh-họa đến những khách-hàng một-vài dự-án.*  
 she PST illustrate to PL client some project  
 ‘\*She illustrated the clients some projects.’

From (2.73) to (2.75), it is interesting to realise that the cross-linguistic syntactic behaviours are not the same across these verbs. Although L2 English verbs like *explain*, *express*, and *illustrate* are only licit in PDCs, their counterparts in L1 Vietnamese still undergo the alternation. Interestingly, the weight of theme also has an effect on the choice of dative structures in Vietnamese, as in (2.76) and (2.77).

- (2.76) a. *Quan đã gửi tiền cho Nga*  
 Quan PST send money to Nga  
 ‘Quan sent the money to Nga.’  
 b. *?Quan đã gửi cho Nga tiền*  
 Quan PST send to Nga money  
 ‘Quan sent Nga the money.’
- (2.77) a. *Thanh đã trình-bày ý-kiến đến mẹ anh-ấy.*  
 Thanh PST express opinion to mother he  
 ‘Thanh expressed the opinion to his mother.’  
 b. *?Thanh đã trình-bày đến mẹ anh-ấy ý-kiến.*  
 Thanh PST express to mother he opinion  
 ‘\*Thanh expressed his mother the opinion.’

Semantically, the Vietnamese items as in (2.76a) and (2.77a) are much more natural than their counterparts as in (2.76b) and (2.77b). L. D. Nguyen's (1975) explanation was that this could be due to "phonetic harmony", according to which the shorter post verbal constituent is placed before the longer one (p. 42). This restriction is quite similar to the heavy NP shift in English as discussed in Section 2.3.4.2.

To recapitulate, Vietnamese is quite flexible in word order compared with English, i.e., some particles and prepositions in Vietnamese syntax are sometimes optional. The learners can add or omit them to make the sentences more natural and meaningful whereas they cannot do this in English. Also, Vietnamese and English contrast in terms of illicit DODCs. Hence, this incongruity can pose some learnability problems for the VLEs when it comes to the acquisition of English DODCs.

### **2.3.7 Previous SLA approaches to dative structures**

The investigation of the English structures has received much attention in both L1 acquisition (e.g., Baker, 1979; Mazurkewich & White, 1984; Gropen et al, 1989) and SLA studies. In this section, the review focuses on the dative structures acquired by EFL/ ESL learners from diverse L1 backgrounds. Roughly speaking, the spectrum of these studies can be divided into five main trajectories, focusing on properties such as discourse factors (Anderssen et al., 2014; Chang, 2004; Marefat, 2005; Jäschke & Plag, 2016; Park, 2014), dative preferences (Aljadani, 2019), markedness (Ariamanesh & Shojai, 2018; Hawkins, 1987; Katsufuji, 2000; Mazurkewich, 1984, 1985; Wolfe-Quintero, 1992; Zeybek, 2018), language transfer (Al-Jadani, 2016; Babanoğlu, 2007; Baten & De Cuypere, 2014; De Cuypere et al., 2014; Le Compagnon, 1984; Oh, 2010; Oh & Zubizarreta, 2005; Zara et al., 2013), and verb classes (Bley-Vroman & Yoshinaga, 1992; Davies, 1994; Inagaki, 1997; Uçkun, 2015; Yang & Montrul, 2017). Below is a review of some relevant SLA studies<sup>11</sup>.

#### **2.3.7.1 Research on markedness**

One of the early and influential studies in terms of markedness is Mazurkewich's

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<sup>11</sup> Mazurkewich (1984, 1985), Hawkins (1987), and Agirre (2015) investigated both dative and benefactive structures in their studies. Like some other linguists (e.g., Baker, 1997; Hua, 1991; Oehrle, 1976), they subsume the benefactive verbs (e.g., *buy*, *cook*) under the dative verb classes (e.g., *send*, *give*). For a relevant purpose of this section, the findings of the dative are only reported in this study. The benefactive experiment will be discussed in Section 2.4.

(1984) research. She investigated the acquisitional sequence by which the English DA is acquired by L2 learners in terms of markedness. There were two groups of non-English-speaking subjects: one group of 45 French L1 speakers (mean age: 18.0) and one group of 38 native Inuktitut (Eskimo) L1 speakers (mean age: 17.0). Based on a cloze test's results, the French group included 23 beginners, 7 intermediates and 15 advanced learners; the Inuktitut speakers included 12 beginners, 8 intermediates and 18 advanced learners. Two control groups of native English speakers were also included: a younger subject group (mean age: 12.3) and an older subject group (mean age: 15.6). Participants were required to judge the acceptability of dative sentences through a GJT. Mazurkewich's experiment was underpinned by an assumption that L2 learners would pass through the same developmental stages in the SLA of the dative as L1 learners. The experimental items were a set of affirmative sentences containing five alternating dative verbs (*give, lend, read, send, throw*) and three nonalternating verbs (*explain, report, suggest*). Each verb appeared in two variants; hence, there were 16 stimuli in total, as depicted in Table 2.3.

**Table 2.3**

*Types of Experimental Items*

Syntactic Type	Example
Type 1: PDCs with alternating verbs	Peter threw a football to Philip.
Type 2: DODCs with alternating verbs	Peter threw Philip a football.
Type 3: PDCs with nonalternating verbs	David suggested the trip to Ruth.
Type 4: DODCs with nonalternating verbs	*David suggested Ruth the trip.
Type 5: distractors	Dennis annoyed Karen yesterday.

The results indicate that both control groups as well as all six experimental groups had the percentage of correct answers for Type 1 from 94.3% to 100%. However, for Type 2, while the NS groups had no difficulty in doing the task, the Inuit groups and French groups rated the items as increasingly acceptable across the three levels of English.

The results for Type 4 indicate that overgeneralisations<sup>12</sup> about DA were made for both experimental group and control group as well. Mazurkewich thus claimed that the PDCs were acquired prior to the DODCs.

Within the theory of markedness, Mazurkewich (1985) later carried out testing on the same participants and test materials in Mazurkewich's (1984). However this research focused on passive and interrogative forms of the dative. In Task 1, both types of passive forms were generated from each alternating dative verb (e.g., *A football was thrown to Philip* vs. *Philip was thrown a football*), and one passive form was made from a nonalternating PDC-only verb (e.g., *A trip was suggested to Ruth*). Mazurkewich proposed that the passive forms in which the themes were passivised were considered as unmarked structures as they had more productivity, covering both alternating and nonalternating verb classes. Hence, these structures were hypothesised to be acquired prior to the ones whose direct object is fronted. The results obtained in Task 1 show that the hypothesis was not rejected. In the second task relating to the interrogative forms of the dative, Mazurkewich proposed that the question form like "To whom did Bob give a gift?" is unmarked, and another one like "Whom did Bob give a gift to?" is marked due to case assignment (Mazurkewich, 1985, p. 24). In this task, the subjects were required to make a question by using the underlined phrase in a given sentence like "Cathy gave a book to Kevin" (Mazurkewich, 1985, p. 25). The results show that French subjects produced more unmarked question forms than marked question forms. However, a reverse tendency was found for the Inuit subjects. The researcher supposed that the Inuit produced more marked forms because of their higher proficiency of English. In Task 3, the participants were given a passivised context with subject-auxiliary verb inversion, and they were asked to complete a question. The findings reveal that the French groups created more unmarked question

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<sup>12</sup> In linguistics, overgeneralisation refers to a rule that one form that is attested in adults' grammar is excessively applied to a nonattested one by children (Ambridge et al., 2014; Braine, & Brooks, 1995; Randall, 1987). Put differently, this is the extension of a rule in which learners apply a restricted linguistic form to another form where it is no longer correct. This rule has been attested in both L1 and L2 acquisition (e.g., Mazurkewich, 1984; Ortega, 2014; Randall, 1987; VanPatten & Benati, 2015; Wolfe-Quintero, 1992). One exemplar is that, regarding the acquisition of the past tense in English, when learners hear some regular verbs in the simple past tense such as *asked*, *played*, or *used*, the overextension can be made for another group of irregular verbs such as *goed*, *eated*, or *sleeped* (VanPatten & Benati, 2015, p. 120).

forms than marked ones. This acquisition sequence was also clear for the intermediate and advanced Inuit groups, but not for the beginner group.

In line with the markedness theory, a subsequent study by Hawkins (1987) re-examined the acquisition of DA by Mazurkewich (1984, 1985) across a wider range of dative verbs. It involved a group of 10 native French speakers. In this study, Hawkins used two elicitation tasks (i.e., one GJT and one sentence construction task) in order to compare the results of two tasks without endangering any particular bias. In Task 1, the GJT<sup>13</sup> shared the same format as that of Mazurkewich's. It consisted of 36 dative verbs (14 of which had been used in Mazurkewich's study), plus these were used in passive declarative forms. There was also a small set of idiom-like expressions involving the verb *give* (e.g., *give the nail a tap*, *give the mattress an airing*). Task 2 featured a sentence construction task. The participants were given reduced sentences in which verb inflections and prepositions had been omitted (e.g., *John pass Mary the letter*). They were then required to inflect the verb for the simple past tense, as a distraction strategy. They were also asked to insert an appropriate preposition, i.e., *to* or *for*. Forty-two verbs were used in this task; only a subset (14 out of 42) of the dative verbs from Task 1 was used. The findings reinforced that the acquisitional order of [NP PP] occurred prior to [NP NP]. However, the order of this acquisition was argued to undergo a developmental sequence which includes a set of complex stages.

In terms of typological approach to markedness, Katsufuji (2000) focused on the markedness and transfer of English dative structures under discourse constraints by means of an acceptability judgement task and an elicited production task. The test was carried out based on the Markedness Differential Hypothesis (MDH) (Eckman, 1996). MDH suggests that those areas of the L2 varying from L1 will be difficult if they are more marked than those of L1, and those areas will not be difficult if they are not more marked than those of L1. For Japanese monolingual speakers, the new-given information order was preferred to the given-new order. In comparison with answers of an accusative prompt, the new-given responses were judged more natural for a dative prompt. Also, when both the new-given and given-new information ordered dative constructions echoed the structure of the preceding interrogative sentence, they

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<sup>13</sup> Hawkins' GJT was slightly different from the one used in Mazurkewich's study, where the participants had to put 'X' next to the grammatical sentences. In his task, the subjects had one more option to put the question mark '?' for the doubtful items.

were judged more natural. Katsufuji formed an experimental group of 35 Japanese learners of advanced level of English (mean age: 27), and a control group of 35 NSs (mean age: 28). The researcher hypothesised that (i) Japanese learners will be sensitive to the difference between the new-given ordering and the given-new ordering in response to dative prompts, (ii) Japanese learners will resist transferring the new-given ordering (marked form) in response to dative prompts, and (iii) Japanese learners will not be sensitive to the difference between new given information ordering and given-new ordering in response to accusative prompts. The following examples are taken from Katsufuji (2000, p. 13).

- (2.78) Who did Paul give the book to? (Dative-PDCs)  
 a. Paul gave the book to Jane. (Echoed, given-new)  
 b. Paul gave Jane a book. (non-echoed, new-given)
- (2.79) What did Paul give to Jane? (Accusative-PDCs)  
 a. Paul gave Jane the book. (non-echoed, given-new)  
 b. Paul gave the book to Jane. (Echoed, new-given)
- (2.80) What did Paul give Jane? (Accusative-DODCs)  
 a. Paul gave the book to Jane. (Non-echoed, new-given)  
 b. Paul gave Jane the book. (Echoed, given-new)

That project involved two tasks: an acceptability judgement task and an elicited production task. The first one employed three verbs (*give*, *offer* and *tell*) which were used in 36 pairs of pre-recorded audio questions and responses. All of the stimuli were equally divided into three types as in (2.78) to (2.80). Half of the responses had given-new information order and half were in reverse order. Participants were asked to judge the naturalness of the answers by a seven-point Likert scale from 1 (totally unnatural) to 7 (totally natural).

The findings of the judgment task in Table 2.4 (Katsufuji, 2000, p. 16) showed that NSs were sensitive to the difference between the new-given information order and the given-new information order, but the Japanese learners were less sensitive to this difference, except for the dative-PDC type. Overall, the learners always had a

preference for the PDCs over the DODCs in all question types, which is demonstrated as evidence of markedness.

**Table 2.4**

*Acceptability Ratings across Dative Construction Types*

Question types	Information order	Japanese learners		Native speakers	
		M	SD	M	SD
Dative-PDCs	New-given	5.46	1.27	4.98	1.71
	Given-new	6.54	.77	6.17	.79
Accusative-PDCs	New-given	6.50	.76	5.01	1.53
	Given-new	6.17	.84	6.41	.88
Accusative-DODCs	New-given	6.49	.71	4.65	1.59
	Given-new	6.33	.78	6.28	.92

Task 2 tested whether learners could produce PDCs or DODCs in a discourse context by using the same verbs as in Task 1. The findings indicated that both groups had similar performance on the dative-PDCs in both tasks. However, overall, the control group had more correct responses for the remaining type. It can be concluded that the acquisition of information-order distinctions fully supports the MDH.

### **2.3.7.2 Research on transfer**

The second wave of SLA work directs their attention to preference transfer. In response to this, Baten and De Cuypere (2014) explored whether Dutch learners of German would transfer their knowledge of Dutch DA to the L2 German ditransitive construction in the framework of Conceptualization Transfer. These two languages differ in terms of DA: while both alternants occur in Dutch, German only allows DODCs. To this end, two 100-split tasks were conducted in order to measure the probabilistic preference of the speaker for one alternant over the other in two experiments. In this respect, for a given dative verb, each participant rated the relative probability of using the two alternants: if they assigned one of these 85 points, then the other alternant would necessarily be assigned 15 points. This was done for pairs of alternants both in German and in Dutch. The first experiment recruited 46 Dutch

students (mean age: 19). The materials consisted of 25 Dutch dative sentences which were translated from their corresponding items in German in a discourse context. The second experiment also involved a sentence-rating task on the basis of 25 ditransitive sentences selected from the DeReKo corpus of written German. Baten and De Cuypere selected 10 German verbs with Dutch equivalents which were known to take DA. Additionally, these sentences were also well-balanced in terms of the structure properties such as discourse status, pronominality, animacy, definiteness, or length of the objects. A total of 25 Dutch learners of German (mean age: 18) took part in this second experiment.

The results pointed out that the DOCs were consistently rated higher in German than in Dutch in both experiments. In other words, there was a cross-linguistics effect between the two languages. The Dutch learners were claimed to have linguistic knowledge that the double-object construction (DOC) is the default structure in German. Baten and De Cuypere further added that the frequency-based explanation provided a good ground for this outcome. Seen in this light, the most frequent pattern used in L1 would be transferred to L2, or in another way, the entrenchment played a role in helping the learners to acquire the German ditransitive. The authors also offered the evidence for the Conceptualization Transfer (Jarvis, 2007), that is, the Dutch speakers conceptualised their thoughts for verbalization.

In another aspect of L1 transfer, De Cuypere and colleagues (2014) investigated whether or not Russian learners transferred their dative preferences from Russian to English. Given that, in Russian language, the DODC is the more frequent pattern than the PDC, a 100-split rating task was administered to two groups of Russian learners (136 per group). Half of the participants did the English task, and the other half did the Russian task. There were 25 target sentences predicated upon nine alternating verbs: *give*, *bring*, *offer*, *show*, *deliver*, *pay*, *send*, *tell*, and *sell*. Each verb appeared in three sentences taken from the British National Corpus (two sentences with *pay* and *deliver* were excluded because their Russian counterparts were only compatible with the PDCs). No evidence was found with regard to a dative preference transferring from L1 Russian to L2 English. However, the preference for the PDCs could be accounted for by the Processability Theory (Pienemann, 1998) in which learners normally turn to the structures (e.g., PDCs) that are easier to process.



### 2.3.7.3 Research on narrow-range verb classes

Another approach is concerned with narrow-range verb classes. In one of his experiments, Sawyer (1995) examined how adult Japanese learners of English represented the DA in the framework of Pinker (2013). The study consisted of 33 NSs and 33 Japanese learners, and the test materials included 70 items which were used to test various constraints such as BRRs, NRRs, and dative structures. All stimulus sentences were judged from 1 (totally unnatural) to 6 (totally natural). The findings demonstrated that both cohorts had sensitivity to the BRR in which the participants consistently rejected the DODCs with no change in possession involved. In respect of the NRR, both cohorts scored high ratings of the PDCs, and demonstrated preference for PDCs over DODCs. In terms of specific verb classes, verbs of communication and verbs of instrument of communication were substantially rated by the control group than by the experimental one.

Inagaki (1997) later expanded Bley-Vroman and Yoshinaga's (1992) study. This research explored the acquisition of the NRRs governing four narrow-range verb classes which included *throw*-class, *push*-class, *tell*-class, and *whisper*-class by Japanese and Chinese learners of English. This study recruited 32 Japanese learners (age range: 22-43), 32 Chinese learners (age range: 18-42), and 32 native English speakers (age range: 18-45). All non-native speakers had high proficiency of English. The materials were divided into two parts. The first part included eight paragraphs plus pictures; each paragraph was followed by a pair of clauses (i.e., one PDC and one DODC) built on the same made-up verbs. The second part included eight pairs of clauses containing real verbs, but without paragraphs or pictures. In each part, all participants were asked to rate the acceptability of each clause on a 7-point Likert scale. Table 2.5 summarises the availability of DODCs in the three L1s (Inagaki, 1997, p. 646).

**Table 2.5**

*Distribution of DODCs in English, Japanese and Chinese*

Language	Throw-class	Push-class	Tell-class	Whisper-class
English	Yes	No	Yes	No
Japanese	Yes	No	Yes	Yes
Chinese	No	No	Yes	No

On the basis of the Fundamental Difference Hypothesis<sup>14</sup> (FDH) (Bley-Vroman & Yoshinaga, 1992), Inagaki hypothesised that (i) whilst native English speakers had no difficulties in distinguishing all verb classes, Japanese learners would only accept the corresponding DODCs with *throw*-class, but not with *push*-class, and (ii) Chinese learners would accept DODCs containing *tell*-class verbs, but not *whisper*-class verbs.

From the results, the native subjects accepted the DODCs containing *throw*-class and *tell*-class, and rejected the *push*-class and *whisper*-class appearing in the DODCs in both real and made-up verbs. Regarding the nonnative subjects, the hypothesis was supported for the Chinese learners but not for the Japanese learners. Put it differently, Japanese and Chinese learners distinguished the DODCs including *tell*-class verbs from those containing *whisper*-class verbs, but not their counterparts with *throw*- and *push*-class verbs. This suggested that Japanese's data was not in favor of the FDH. The UG was claimed for this phenomenon in that some adult learners can access some properties of UG while others cannot. The last account for these results was underpinned by the frequency-based explanation. The researcher argued that some specific structures happened more frequently than others in the learners' input. For example, in respect of the DODC, *tell*-type verbs had more occurrences than *throw*-type verbs, leading to the fact that both Japanese and Chinese groups distinguished the DODCs containing *tell*-type verbs from their counterparts using with *whisper*-type verbs, or all of them could not distinguish the DODCs containing *throw*-type verbs from those containing *push*-type verbs. However, this explanation was insufficient for the data of made-up verbs.

#### 2.3.7.4 Research on discourse factors

Discourse factors are known to have an influence on the choice of dative structures. Although a review of such studies investigating this phenomenon is beyond the scope of this thesis, I need to mention some key ones so as to examine whether the markedness or L1 transfer still shows validity in these studies.

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<sup>14</sup> The FDH holds that UG is not available except as instantiated in the mental representation of the learner's native language (Bley-Vroman & Yoshinaga, 1992).

The first study is Marefat (2005) tested whether Persian EFL learners were sensitive to discourse factors affecting the choice of dative variants. There was a total of 187 Persian L1 students (age range: 18-28) who fell into three levels (low-intermediate, high-intermediate, and advanced) based on results of a Michigan test, and a group of elementary learners of English. The third group was a control group of 39 NSs, aged 15-41. The study aimed to examine whether Persian EFL learners at different levels of English proficiency produced the dative constructions using the information order, and whether they preferred the dative construction congruent with the information order.

In answer to the above questions, Marefat employed two tasks. The first was a contextual written production task in which the participants were required to listen to questions on a pre-recorded audiotape, and then to write down their responses on the basis of the cue words. The second was a recognition task containing 32 interrogative sentences which were present in four types (accusative-PDCs, dative-PDCs, accusative-DODCs, dative-DODCs). The participants were asked to listen to question-answer pairs, and judge the naturalness of each answer on a 7-point Likert scale. The results obtained in the first task confirmed that no participants showed evidence of sensitivity to the information order or the dative structure. However, when echoicity was brought into consideration, except for the elementary level, learners of the other levels echoed the structure they heard in the question. In the second task, only advanced and high-intermediate clusters had similar ratings as the NSs in which given-new responses were rated higher than new-given responses. In this task, only the elementary cluster consistently rated the PDCs higher than the DODCs regardless of the preceding discourse context. Marefat claimed that markedness and lack of L1 DODCs were attributed to elementary learners' acquisition.

Another relevant study of transfer was conducted by Agirre (2015) in which the Spanish learners were tested whether they showed sensitivity to DODCs in comparison to PDCs. Plus, the semantic and morphology constraints as well as the native-like competence were also examined. Syntactically, Spanish DODCs are claimed to have an underlying structure similar to their counterparts in English. However, the other differences are that Spanish DODCs are only found in clitic doubling constructions and that they can be used with a greater variety of verbs in comparison with English DODCs. A total of 90 ESL Spanish learners (age range: 18-28) were classified into three proficiency groups: elementary, intermediate, and

advanced. There was also a control group of 30 NSs (age range: 21-25). Two acceptability judgment tasks were employed in this study: an auto-paced reading task<sup>15</sup> (APRT) and a self-paced reading task (SPRT).

All verbs were previously built on Oh's (2010) work in which verbs were grouped according to three conditions: the structural condition, the morphological constraint condition and the semantic condition, as in Table 2.6 (Agirre, 2015, p. 73).

**Table 2.6**

*Distribution of Dative Verbs*

Latinate verbs	Exceptional verbs	Control verbs
suggest	push	kick
return	pull	throw
explain	drag	tell
repeat	whisper	show
describe	shout	bring
recite	yell	hand

Each verb was investigated in two dative variants: a PDC and a DODC. Hence, there was a total of 36 stimuli all of which were rated from “completely acceptable” to “completely unacceptable” in a seven-point Likert scale.

Concerning the sensitivity to DODCs, the results predicated that only elementary learners had more correct acceptability of DODCs than PDCs in the APRT. However, as for the SPRT, there was a different tendency of judgements of PDCs and DODCs in three proficiency groups. That is, similar acceptability between PDCs and DODCs for the elementary group, higher acceptability of PDCs than DODCs for the intermediate group, and higher acceptability of DODCs than PDCs for the advanced group. In relation to the morphology and semantic constraints, the findings of the APRT showed that three proficiency groups had more accurate acceptability of control conditions than Latinate and exceptional verb conditions in terms of sensitivity of DODCs. In the SPRT, this tendency stayed remained for the intermediate and advanced learners, but not for the elementary learners who found it difficult to accept

<sup>15</sup> Being irrelevant to this study, the findings of reaction times were not reported.

control conditions. Concerning the native-like performance, learners did not obtain native-like accuracy although advanced learners outperformed elementary and intermediated ones in all experimental conditions.

The results of the elementary learners could be explained by the FT-FA model (Schwartz and Sprouse, 1996) inasmuch as their acquisition has been affected by the similarities and differences of both languages. Another account for this outcome is the overgeneralisation effect in which learners with higher level of English have more concerns about their acceptability.

A more recent study by Jäschke and Plag (2016) investigated whether learners of English preferred the PDCs or DODCs, and whether different factors (e.g., length, animacy, definiteness) could determine the choice of either one of the two dative variants. By means of a sentence-rating task, 24 advanced German learners of English (age range: 20-25) were required to rate which context dative variant (in 30 text passages) sounded more natural. The results revealed that advanced learners showed only a slight preference for PDCs as compared to L1 speakers. The largest difference between both groups was that the ESL speakers were influenced by fewer variables. Out of the predictors investigated, L1 speakers were influenced by eight predictors as compared with five predictors for L2 learners. Overall, 11 learners demonstrated some preference for the DODCs, and the rest preferred the PDCs. According to a processing-based perspective, the ones who had a bias towards the PDCs were because they may be less advanced and they preferred the simpler structures to process.

To sum up, through the review of previous SLA research, markedness has been proved to have an influence on learners' acquisition of dative structures (Hawkins, 1987; Mazurkewich, 1984, 1985), and this constraint has provided a validation even in a given context (Katsufuji, 2000; Marefat, 2005). Furthermore, clear evidence indicates that L1 transfer has an influence on the acquisition of an L2 (Baten & De Cuypere, 2014; De Cuypere et al., 2014; Jäschke and Plag, 2016), and learners are sensitive to BRRs but insensitive to NRRs (Inagaki, 1995; Sawyer, 1995).

### **2.3.8 Implications for addressing the research gap**

Although there have been some SLA studies on DA investigating the effects of L1 transfer, the present study differs from these ones in the following respects:

Firstly, although the previous studies have extensively examined the DA, they still have some shortcomings regarding the data or discussion. The first one is that the

transfer outcomes of many studies were underpinned by assumptions as no L1 items were employed. Consequently, these assumptions were mostly built on the grounds of the markedness theory or the crosslinguistic correspondence, and in many cases, these were not correct. In Mazurkewich's (1984) study, for instance, French L2 learners' ratings of PDCs over DOCs were claimed due to markedness. However, this could be owing to the lack of DOCs in L1 (See Kellerman, 1985, for further drawbacks of Mazurkewich's). With regard to the materials used in these studies, it was quite strange that De Cuypere et al. (2014) listed *deliver* as an alternating verb, while others (e.g., Levin, 1993; Pinker, 2013) classified it nonalternating. Thirdly, as far as the participants are concerned, although Mazurkewich's study covered a wide range of experimental participants' levels (i.e., beginner, intermediate, advanced), the sample size for each level was quite small. The number of participants in Hawkins (1987) and Jäschke and Plag (2016) also encountered the same problem. According to Cohen et al. (2007), the recommended minimum sample size is 30 if researchers plan to analyse their data statistically. On top of that, although Hawkins' research was experimental, no control group was used. The possibility of task effects could not be thus excluded. To count more, the participants recruited in Inagaki (1997) and Jäschke and Plag (2016) were limited to advanced learners only. It was thus felt that they did not provide a developmental perspective regarding the NRRs or dative preferences, respectively. Lastly, in Inagaki's study, the frequency of structures/verbs was not controlled enough and the text before the acceptability judgement item included a PDC example, so this could have exerted some effect on the participants' answers.

Secondly, to the best of my knowledge, no study has been conducted in the Vietnamese context. Rather, the L2 acquisition of the DA has been examined using learners from various L1 backgrounds such as Arabic (Al-Jadani, 2016; Aljadani, 2019), Brazilian (Zara et al., 2013), Chinese (Chang, 2004), French (Le Compagnon, 1984; Hawkins, 1987), French and Inuit (Mazurkewich, 1984; 1985), German (Jäschke & Plag, 2016), German and Dutch (Baten & De Cuypere, 2014), Japanese (Bley-Vroman & Yoshinaga, 1992; Katsufuji, 2000), Korean (Oh, 2010; Park, 2014), Korean and Japanese (Oh & Zubizarreta, 2005), Norwegian (Anderssen et al., 2014), Persian (Ariamanesh & Shojai, 2018; Marefat, 2005), Russian (De Cuypere et al., 2014), and Turkish (Babanoğlu, 2007; Zeybek, 2018). Given that the language pair Vietnamese-English differs with respect to the word-order flexibility, there is hence the question of whether VLEs are influenced by language transfer when judging dative

constructions. Although there are some cases in which an English dative verb and its Vietnamese counterpart behave analogously, there are other cases in which these languages differ in terms of which verbs can alternate and which verbs cannot.

Thirdly, regarding the methodology, one shortcoming is that some previous experimenters did not ensure that all the participants knew all the meanings of the target verbs. As a result, the participants may not have known the syntax of at least some of the target verbs. In the current study, only the participants who know the meaning of all test verbs were eligible for the experiments. In relation to the research instrument, the GJT has been, generally, much employed in SLA studies, and in the field of dative constructions specifically (Babanoğlu, 2007; Baten and De Cuypere, 2014; Davies, 1994; Hawkins, 1987; Mazurkewich, 1984, 1985; Aljadani, 2019; Uçkun, 2015, and among the others). However, all of these studies have employed the paper-based GJT (e.g., Mazurkewich, 1984; Uçkun, 2015) in which the participants would rate the grammaticality of the items on paper. This raised the fact that the participants could look back to compare the similar syntactical items and then change their answers. The current study would use the computer-assisted GJT, which has helped to solve this problem of the participants' referring back to edit their responses.

Last but not least, to the best of my knowledge, no SLA studies in the extant literature have looked at DAs in terms of similar semantics of each verb pair. In my current experiment, all 16 target verbs were divided into eight pairs of dative verbs of similar meaning. Each pair included one alternating monosyllabic verb (native) and one nonalternating polysyllabic verb (Latinate).

## **2.4 Experiment 2: The benefactive alternation**

### **2.4.1 Learnability problems**

Benefactives have captured much attention in the literature over the last four decades (Baker, 1997; Levin, 1993; Oehrle, 1976). There is some syntactic parallelism between DA and the BA, so many researchers have subsumed this type of alternation under the datives (Green, 1974; Hawkins, 1987; Pinker, 2013). Also, many scholars (e.g., Campbell & Tomasello, 2001) considered that there are three types of English dative alternations: the double-object dative, the *to*-dative, and the *for*-dative.

The acquisition of the BA is as problematic for L2 learners as that of DA. Although the dative and benefactive constructions share the same [NP-NP] lexical

feature, it does not imply that similar semantics will be denoted. Another issue is that the NP-NP pattern is not completely productive across all verbs, as illustrated in (2.81) and (2.82).

- (2.81)        a. I built him a house.  
              b. \*I constructed him a house.

- (2.82)        a. Joe baked Mary a cake.        (Goldberg, 1995, p. 121)  
              b. \*Joe iced Mary a cake.

The above contrasted expressions may pose many difficulties for learners. When EFL learners, for instance, hear *I built a house for him* or *I built him a house*, they can formulate a transformational rule that allows the latter structure to be derived from the former one. On this transformational account, this leads to the overgeneralisation of a new verb-construction combination like (2.81b) from (2.81a) inasmuch as *build* and *construct* are virtually synonymous. Will they correctly judge the (un)grammaticality of the DOC based on each of these synonyms? This syntactic learnability will be thoroughly explored in this experiment. This experiment thus represents an effort to explicate the acquisition of the BA in terms of the L1 transfer. Another goal of this study is to investigate the markedness, as well as the morphology constraint of the benefactives.

#### 2.4.2 Syntactic and semantic properties of English benefactive structures

English BA can be expressed with two syntactic forms, as in (2.83) and (2.84).

- (2.83)        a. John baked a cake for **Mary**. (PBC)  
              b. John baked **Mary** a cake. (DOBC)
- (2.84)        a. He cooked a meal for his friend. (PBC)  
              b. He cooked his friend a meal. (DOBC)



The pairs of expressions in (2.83) and (2.84) are prototypical examples of the benefactives<sup>16</sup>. Syntactically, DOBCs are formed in the same way as DODCs, that is, the main verb precedes two NPs (i.e., no preposition is involved). In this alternation, the NP-PP pattern in (2.83a) will arise in the NP-NP pattern as in (2.83b). Verbs like *bake* and *cook* are called alternating benefactive verbs since they are compatible with two syntactic patterns: the prepositional benefactive construction (PBC) and the double object benefactive construction (DOBC). However, there are some other verbs (e.g., *borrow*, *purchase*, *select*) that can only be used in the PBCs, and these are called nonalternating benefactive verbs, as in (2.85).

- (2.85)           a. Terri borrowed/ purchased/ received a book for Tina.  
                   b. \*Terri borrowed/ purchased/ received Tina a book.

To be explicit, the bolded indirect objects in (2.83a-b) are hereby defined as oblique benefactive (OB-BEN, henceforth) and noun phrase benefactive (NP-BEN, henceforth), respectively. The BA happens when the direct and indirect objects are permuted with each other, and there is a deletion of the preposition *for* preceding the OB-BEN.

The benefactive case occurs when a structure denotes the semantics, such as *for the benefit of* or *intended for* as in (2.83a). In the benefactives, the beneficiary is defined as an animate participant that is advantageously affected by an event (Zúñiga & Kittilä, 2010). Beneficiaries and recipients sometimes are not distinct from each other because they have some features in common. For instance, *Mary* is encoded as either a beneficiary or a recipient in (2.83a) or (2.83b), respectively (Tomioka & Kim, 2017). Likewise, the OB-BEN plays the role of a beneficiary while the NP-BEN plays the role of a recipient (Zúñiga & Kittilä, 2010).

When it comes to the syntax, there is a raising concern over whether NP-BENs are adjuncts or arguments of the verbs in the benefactive construction. In linguistics, adjuncts are always optional, whereas arguments are either obligatory or optional and they are closely associated with the predicate (Thompson et al., 1995; Toivonen,

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<sup>16</sup> In many other studies (e.g., Fishcher, 1972; Green, 1974; Oehrle, 1976; Pinker, 2013), the benefactive construction is also called the *for*-dative construction since the syntactic difference between datives and benefactives lies in the use of the prepositions *to* and *for*, respectively.

2013). Put differently, “the arguments are the participants minimally involved in the activity or state expressed by the predicate” (Haegeman, 1994, p. 44). On this account, the NP-BEN is similar to an adjunct in terms of their optionality in the syntax. For example, in (2.83a), John could bake a cake without any intended benefactor (i.e., *John baked a cake*). Although English NP-BENs are adjunct-like in terms of the optionality, they are naturally treated to be internal arguments of the verb, and also do have stricter ordering (only after verbs) than that of adjuncts. Thus, Toivonen (2013) inclines to believe that NP-BENs are arguments. PBCs are therefore claimed to be more flexible and productive than DOBCs (Jackendoff, 1990, p. 195), as illustrated in (2.86).

- (2.86)           a. John borrowed/ collected/ received a book for Mary.  
                   b. \*John borrowed/ collected/ received Mary a book.

This view is particularly pertinent to Levin’s (1993, pp. 48-49) classification of benefactive verbs that there are only two types of benefactive verbs: alternating verbs, and PBC-only verbs.

Semantically, the PBCs are ambiguous with respect to various readings. In the case of (2.83a) again, John could intend for Mary to have the cake, or John wanted to bake the cake for the other people on Mary’s behalf, i.e., Mary could be too busy to do by herself, or Mary did not know how to bake it. The expression in (2.83b), on the other hand, generates one sub-sense of meaning, in which the transfer of cake was intended to Mary (Goldsmith, 1980; Toivonen, 2013). Generally, this is along the lines of previous literature (Goldberg, 1995; Gropen et al., 1989; Green, 1974; Oehrle, 1976; Pinker, 2013) that ditransitive expressions encode a relationship of possession between the direct object and the indirect object. Following this discussion, the semantic distinction between DOBCs and PBCs lies in the treatment of the intention of the agent performing the action. Simply put, the intended reading in (2.83b) does not mean that John wanted to show his baking demonstration, or John baked a cake for himself because of Mary’s desire. Rather, the valid interpretation is that John had an intention to bake a cake and then gave it to Mary. Generally, *bake* used in DOBCs denotes a meaning of “intended transfer”, and has a semantic field like “X intends to cause Y to receive Z by baking” (Goldberg, 1995, p. 141). This semantic distinction between benefactive variants can be seen in (2.87), which is quoted from Oehrle (1976, p. 109).

- (2.87)           a. John baked a cake for Mary, but now that you're here, you may as well take it.  
                   b. \*John baked Mary a cake, but now that you're here, you may as well take it.

The contrast in (2.87) happens because, while the intention of the agent only existed at the time that the cake was baked in (2.87a), this intention lasts subsequently in (2.87b). Besides the transfer of physical possession, the metaphorical transfer of possession sometimes exists, like *kill me a dragon* or *cry me a river* (Green, 1974, p. 96). Consider another example in (2.88).

- (2.88)           a. John sang a song for Mary.  
                   b. John sang Mary a song.

In (2.88), the beneficiary is understood to enjoy nonliteral possession (Green, 1974). The default interpretation here is that the song already exists. By contrast, in an example like *John baked Mary a cake*, the cake is being created: the cake cannot possibly exist before John bakes it. In some contexts, the OB-BEN and NP-BEN can be present in the same construction, as in (2.89) (Toivonen, 2013, p. 512).

- (2.89)           I cooked the happy couple some food for my mother.

It is possible to understand that (2.89) denotes an event in which the couple will receive the food, but the mother will receive the benefit in some way. The cooking could be done for her sake, or on her behalf. However, the account that verbs of creation or verbs of obtaining only happen in DOBCs is not always correct. There is some evidence in which this rule is violated. Observe the following illustrations from Takami (2003, p. 204).

- (2.90)           a. \*John killed Mary the centipede.  
                   b. John killed Mary a centipede for her collection.  
                   c. John, could you kill me another rat? I'm still hungry.

The ungrammaticality of (2.90a) can be explained due to the fact that *kill* is neither a verb of creation nor a verb of obtaining. However, (2.90a) and (2.90b) are perfectly acceptable because of a new context that has just been added to them. The reading in (2.90b) invokes the fact that Mary will receive a centipede for her collection, and the speaker will receive a rat from John in (2.90c). Therefore, (2.90b) and (2.90c) indicate that it is such a long way from enough to catch the meaning of one verb alone. Hence, the verb *kill* is compatible with DOBCs when being observed in a full context, not in a separate single meaning per se.

### 2.4.3 Types of benefactive

*For*-phrases are normally attached with a majority of benefactive structures. A *for*-phrase is only considered to be benefactive if the noun headed by *for* is person, animal, group, or location (Lapata, 1999, p. 400). It has been noted that not all PPs used with *for* express the meaning of beneficiary since they have other various functions such as temporal, purposive, benefactive, or causal adjuncts, and they have flexible positions in the syntax. Consider examples (2.91-2.93) quoted from Faraci (1974, p. 29).

- (2.91) John trains the new recruits to make a living for himself. (Rationale)
- (2.92) John trains the new recruits to make a living for themselves. (Objective)
- (2.93) John was baking a cake for entertainment. (Purpose)

Although (2.93) has a benefactive reading, it is essential to distinguish it from the ones discussed above. In this expression, the agent (not the beneficiary) here intends to receive the benefit from the object of *for*. Aside from these details, *for* can be construed as meaning of exchange when being accompanied with verbs like *buy*, *pay*, *rent*, *sell*, or *trade* (Jackendoff, 1990, p. 183), as illustrated in (2.94) and (2.95).

- (2.94) Mary paid \$10 to John for a chair.
- (2.95) John sold a chair to Mary for \$10.

There are at least three different senses of benefactives. Let us have a look at

examples from (2.96) to (2.98) (Van Valin & LaPolla, 1997, pp. 383-384).

(2.96) Robin baked Sandy a cake. (Recipient benefactives)

(2.97) Rita sang for the students. (Plain beneficiaries)

(2.98) Pat stood in line for Kim. (Deputative beneficiaries)

In (2.96), the beneficiary is also a recipient, which has just been discussed above. The sentence has a sense of plain beneficiary when the benefit is something like amusement or enjoyment, as in (2.97). In (2.98), the deputative beneficiary is available when someone is performing the action in place of the beneficiary.

#### 2.4.4 English benefactive verbs

Works by Green (1974), Levin (1973), and Pinker (2014) have drawn attention to benefactive verb classification according to semantic grounds. Green (1974, pp. 92-96), for example, provides five following verb classes:

- i. Verbs denotes creative acts which exist in the intention of the agent: e.g., *make*, *cook*, and *boil*.
- ii. Verbs denotes activities involving selection: e.g., *buy*, *purchase*, and *choose*.
- iii. Verbs denotes performances considered artistic: e.g., *sing*, *chant*, and *recite*.
- iv. A few verbs can take inanimate agent. These verbs express a kind of obtaining: e.g., *earn*, *gain*, and *win*.
- v. Expressions denote the so-called “benefactive” construction, as in “They’re going to kill Reagan a hippie”.

Following Green’s approach, the last verb group comprises various cases and a number of verbs from others classes. On the other hand, Pinker (2013) proposes the narrow classes of verbs participating in PBCs or DOBCs. Although I agree that Green’s classification may have consisted of all types of benefactive verbs so far, I would depict Levin’s (1993, pp. 48-49) approach in details since this seems better in term of

separating alternating and nonalternating verbs in different sections. Although they have tried to list as many semantically-related verbs as possible, this list is not exhaustive. For example, some more benefactive verbs are not listed in these researchers' studies, such as *cause*, *spoil*, *afford*, or *prescribe* (Lapata, 1999, p. 401).

#### 2.4.4.1 Alternating verbs

In the present study, the list of alternating benefactive verb subclasses was reported from Levin (1993, pp. 48-49).

(a) *Create-type verbs*<sup>17</sup>: e.g., *arrange*, *assemble*, *bake*, *blend*, *boil*, *build*, *cook*, *design*, *dig*, *make*, *prepare*, *shape*, *toss*, *weave*.

This verb group has properties of creating objects. For instance, verbs like *bake*, *boil*, and *cook* have the food-creation sense, while *build-type* verbs like *build*, *shape*, and *dig* have the interpretation that some new materials or objects are being formed.

- (2.99)           a. Jackson designed a house for me.  
                  b. Jackson designed me a house.

(b) *Verbs of performance*: e.g., *dance*, *draw*, *paint*, *play*, *recite*, *sing*, *write*.

- (2.100)          a. He drew a picture for his friend.  
                  b. He drew his friend a picture.

(c) *Verbs of obtaining*: e.g., *book*, *buy*, *cash*, *earn*, *gain*, *gather*, *get*, *hire*, *lease*, *leave*, *phone*, *vote*.

- (2.101)          a. I booked a hotel for my family.  
                  b. I booked my family a hotel.

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<sup>17</sup> Levin (1993, pp. 48-49) divided this group into three subclasses: *build-type* verbs, *create-type* verbs and *prepare-type* verbs. Since these verb subclasses share the similar notion of creating something new, they have been collapsed into one subclass, namely *create-type* verbs.

Some verbs (e.g., *earn*, *gain*, *win*) in subset (c) can follow an inanimate agent (example [2.102b] adapted from Green, 1974, p. 95).

- (2.102)        a. This achievement will gain a world-wide reputation for you.  
                   b. This achievement will gain you a world-wide reputation.

#### 2.4.4.2 Nonalternating verbs

This verb subclass includes verbs that are licit in PBCs only. It has four subdivisions.

(a) *Obtain-type* verbs: e.g., *accept*, *accumulate*, *acquire*, *borrow*, *collect*, *purchase*, *receive*, *retrieve*, *select*.

- (2.103)        a. I borrowed a car for Mary.  
                   b. \*I borrowed Mary a car.

(b) Verbs of selection: e.g., *designate*, *favor*, *indicate*, *pick*, *prefer*, *select*.

- (2.104)        a. My mother picked a new shirt for me.  
                   b. \*My mother picked me a new shirt.

Green (1974) and Pinker (2014) both agree that most verbs in this group do not license DOBCs although they have the possibility of change of possession. However, Pinker adds that when these verbs go with some other particles, these constructions turn out to be grammatical (p. 133).

- (2.105)        a. \*My mother picked me a new shirt.  
                   b. My mother picked me up a new shirt.

(c) Verbs of creation: e.g., *compose*, *compute*, *construct*, *derive*, *form*, *invent*, *organise*, *recreate*.

- (2.06)        a. I composed a song for my friend.  
                   b. \*I composed my friend a song.

Verbs which go to this group only allow a PP complement. Yet, Green (1974, p. 93) finds the following sentence not odd at all .

(2.107)        They had created me a monster!

(d) Verbs of stealing: e.g., *abduct, capture, extract, grab, lift, recover, redeem, take, withdraw, wrest*.

(2.108)        a. I lifted the suitcase for her.

                  b. \*I lifted her the suitcase.

From the nonalternating verb subclasses above, it could be concluded that PBCs are well-formed, whereas this is not the case for their counterparts in DOBCs. This is consistent with the idea that the syntactic productivity of PBCs covers a wider benefactive construal than that of DOBCs (e.g., Hawkins, 1987; Jackendoff, 1990; Oh, 2010; Oh & Zubizarreta, 2009; Pinker, 2013).

#### **2.4.5 Factors affecting acceptability**

Like dative constructions, there are also some factors overruling the alternation of one benefactive verb. They are listed as follows.

##### **2.4.5.1 The animacy constraint**

Some verbs belonging to the verb subclass of performance (e.g., *draw, play, or sing*) require an animate agent when performing the action. Still, there are some musical instruments that can play the music independently of a performer, and these could be the music box, player piano, or electronic organ. When they play roles as the agents, the benefactives cannot happen, accordingly (Green, 1974).

(2.109)        a. Lucy played the piano for us.

                  b. Lucy played us the piano.

(2.110)        a. \*The piano played “Yesterday” for us.

                  b. \*The piano box played us “Yesterday”.





It is assumed that Mary arranged some flowers or a song in order to pay tribute to the memory of her ancestors or her late husband in (2.114) and (2.115), respectively. However, her ancestors or her husband must have passed away before the time Mary is living. Thus, in this account, the (b)-patterns are malformed, as the theme cannot be transferred to a non-existent entity. However, (2.116) quoted from Baker (1997, p. 89) suggests that the above contradiction can still be found in texts, although its meaning may be anomalous.

- (2.116)        Mary sang her husband a song, but he didn't hear it because he had just died.

#### 2.4.5.3 The creation constraint

One of the semantic constraints on DOBCs is that the action generated by the agent has to be that of creation (Pinker, 2013). Consider the illustrative contrast in (2.117) (Nisbet, 2005; Jackendoff, 1990).

- (2.117)        a. \*John fixed Mary a TV.  
                  b. John fixed Mary dinner.

The different acceptability of the pair in (2.117) comes from the fact that the verb *fix* in (a) and (b) is not synonymous. This is because some homophonous verbs with different semantics are associated with different syntactic properties (Green, 1974). In (2.117a), *fix* is equivalent to *mend* or *repair*, so *fix a TV* cannot mean that a new entity is being created, as the action of the verb is being performed on a pre-existing object. However, *to fix a dinner* can be interpreted as *to make a dinner*, which creates something new. This explanation also helps understand why *\*Tim poured Tom some cement* is not well-formedness, but *Tim poured Tom a new concrete driveway* is totally acceptable; specifically, in the latter event, something is being created.

This elucidation, in the same manner, is used to explain the syntactic well-formedness of verbs such as *burn*, *smash*, and *crush*. Example (2.118) is taken from Green (1974, p. 92).

- (2.118)        a. Mary burned John a steak because she thought he liked it that way.  
                   b. \*Mary burned John a steak because she didn't realize he liked it that way.

This contrast, intuitively, derives from the dependent clauses which show the reasons for the action. While the former reading is acceptable, the latter is not. The verb *burn* is understood to express the artistic meaning in (2.118a). Mary therefore thought that John would like her creativity expressed through the action of burning the steak. By contrast, the second expression in (2.118b) implies that Mary acted in a malicious way and not for the benefit of John. Hence, the difference between them is the verb semantic constraint (i.e., the creation sense) (See also Goldberg, 1989 and Takami, 2003 for related discussion).

#### 2.4.5.4 Other constraints

The contrasts between PBCs and DOBCs are also noted by Baker (1997), who points out that adverbs cannot be allowed to separate the two NP arguments in DOBCs. Nevertheless, this can happen in PBCs.

- (2.119)        a. John made a cake yesterday for Mary.  
                   b. \*John made Mary yesterday a cake.

One further constraint on DOBCs is a pronominal restriction, whereas this does not apply to the prepositional pattern.

- (2.120)        a. John made it for Mary.  
                   b. \*John made Mary it.

Verbs denoting particular kinds of dancing or playing (belonging to verbs of performance), depending on the properties of the objects performed upon or the work performed, cannot occur with DOBCs, as in (2.121) (Green, 1974, p. 94).

- (2.121)        a. She played us her trombone.  
                   b. ?She blew us her trombone.

## 2.4.6 Constraints on the benefactive alternation in English

### 2.4.6.1 The broad range rules

Pinker (2013, p. 99) asserts that PBCs express the conflation “X acts-on Y for the benefit of Z”. Benefactive verbs taking PBCs only alternate if the agent can cause the beneficiary to possess the theme in the manner specified by the verb. For example, the verbs of creation are alternating because they have the meaning of creating something new, leading to someone owing it. Verbs of obtaining (e.g., *get*, *buy*, *book*) belong to this group as well, because someone obtaining a thing will result in their possession of that thing. By contrast, verbs that only convey the benefit of a third party, without denoting any change of possession, can be licit with only PBCs. For this reason, the thematic core related to the verbs of choosing (e.g., *collect*, *borrow*, *select*) does not cause any possession for the recipient in DOBCs.

- (2.122)           a. John borrowed the books for Mary  
                      b.\*John borrowed Mary the books

### 2.4.6.2 The narrow-range rules

The BRRs, however, do not give precise sufficient conditions for a benefactive verb to alternate. By way of illustration, verbs of choosing (e.g., *choose*, *pick*, *select*) are compatible with the possibility of change of possession, but they belong to nonalternating subclasses, as in (2.123).

- (2.123)           a. Helen chose a dress for her daughter.  
                      b.\*Helen chose her daughter a dress.

To solve this problem, Pinker suggests the NRRs, which pose a sufficient condition for a benefactive verb to alternate. NRRs include a narrow set of verbs, which have similar kinds of meanings (known as narrow conflation classes) participating in particular constructions. The principal subclasses of benefactive verbs that have NRRs are manifested in Table 2.7 (adapted from Gropen et al., 1989, p. 244; Pinker, 2013, pp. 133-134).

**Table 2.7***Narrow Sets of Benefactive Verbs*

Verb type	Subclass	Examples
alternating	creation	bake, make, build
	obtaining	get, buy, find
nonalternating	choosing	choose, pick, select

A sentence like *\*John picked Mary a flower* is likely to be ruled out by most speakers, but *John picked Mary out a flower* is grammatical (Bowerman, 1987). Pinker (2013, pp. 133-134) explained that when this main verb is combined with the particle *out*, there is transfer of possession from John to Mary. This regulation also applies to some other nonalternating verbs, such as verbs of creation (e.g., *tap, bang*). Consider (2.124) (Pinker, 2013, p. 134).

- (2.124)        a. *\*Juan tapped/banged her a tune on the xylophone.*  
                   b. *Juan tapped/banged her out a tune on the xylophone.*

**2.4.6.3 Morphological constraint**

Like dative verbs, the benefactive verbs are also affected by the morphological constraint. This constraint applies to verbs of creation (e.g., *construct, create, design*) or verbs of obtaining (e.g., *collect, obtain, purchase*) (Gropen et al., 1989; Oehrle, 1976; Pinker, 2013). In light of this, the sentences with *construct* or *purchase* in (2.125) and (2.126) are excluded from the domain of the BA.

- (2.125)        a. *John constructed a house for Tim.*  
                   b. *\*John constructed Tim a house.*
- (2.126)        a. *John purchased a house for his parents.*  
                   b. *\*John purchased his parents a house.*

**2.4.6.4 Markedness**

Following the theory of markedness, PBCs are the unmarked forms while DOBCs are

the marked forms. This assumption is primarily based on a criterion that more benefactive verbs in English go with the pattern [NP-PP] than the pattern [NP-NP]. In another sense, the syntactic productivity of PBCs is greater than that of DOBCs, and the latter pattern is considered as a subgroup of the former pattern (Hawkins, 1987; Mazurkewich, 1984). Of a pair in an alternation, this rule is used to explain which form is the basic and which form is the derivation. The verbs appearing in the restricted form can also appear in the non-restricted one. However, this case does not happen in the opposite direction, where not all of the verbs appearing in the non-restricted form appear in the restricted form. The patterns of marked and unmarked forms are exemplified by pairs in (2.127) and (2.128). In each example, PBCs form in (a) is the unmarked form.

- (2.127)        a. Terri borrowed a book for Tina.  
                   b. \*Terri borrowed Tina a book.

- (2.128)        a. Ethan lifted a chair for Emily.  
                   b. \*Ethan lifted Emily a chair.

#### **2.4.7 The dative-benefactive comparison**

Semantically, DODCs and DOBCs both denote a change of possession. However, the latter structure can be experienced with an overlay of benefaction (Pinker, 2013). One more relation between the datives and benefactives is that it is sometimes not easy to determine whether the dative or benefactive construal is interpreted from a DOC. Consider (2.129) quoted from Malchukov et al. (2010, p. 2).

- (2.129)        a. She brought me a coffee.  
                   b. She brought a coffee to me. (Dative meaning)  
                   c. She brought a coffee for me. (Benefactive meaning)

We have two constructions derived from (2.129a). While (2.129b) focuses on the theme movement, (2.129c) draws attention to the beneficiary. I conjecture that we can only base on a specific discourse context to determine the choice of these interpretations. Further to this, Malchukov et al. (2011) points out that beneficiaries, unlike datives, may also go with intransitive verbs, as in *She sang for me*.

Another DA-BA difference is that the BA, unlike DA, does not have verbs that are only licit in DOBCs. Furthermore, although the dative and benefactive structures share many common verbs (e.g., *call*, *find*, *sing*; Levin, 1993), these verbs happen in different syntax. For example, *call* is listed as a DODC-only dative verb (*dub* verb subclass), but as an alternating benefactive verb (*get*-type subclass). In the same manner, *find* and *sing* are categorised as a DODC-only dative verb (*declare*-type subclass) and a PDC-only dative verb (verbs of manner of speaking), respectively. Yet they are both alternating benefactive verbs: *find* belongs to *get*-type verbs, and *sing* belongs to verbs of performance. Example (2.130) illustrates the case of *sing*.

- (2.130)      a. \*John sang Mary a song. (Verb of manner of speaking)  
                  b. John sang Mary a song. (Verb of performance)

In terms of semantics, let us have a look at the contrast in (2.131) (Nisbet, 2005, p. 54).

- (2.131)      a. John bought Mary a book, but then decided to keep it. (No theme transferred)  
                  b. \*John lent Mary a book, but then decided to keep it. (Theme transferred)

The contrast in (2.131) happens because of underlying the semantics of *buy* and *lend*. In (2.131a), John bought a book with the intention of giving it to Mary, but he changed his mind later. Thus, there is no possession change in this case. By contrast, the action *lend* invokes that the book has moved away from John to the recipient, so that it is impossible for John to still possess it in this situation. This semantic difference helps us understand that, while recipients are often obligatory argument in the dative syntax, beneficiaries are not, as in (2.132) and (2.133).

- (2.132)      a. John bought a book for Mary.  
                  b. John bought a book.

- (2.133)      a. John lent a book to Mary.  
                  b. \*John lent a book.

While omitting the *for*-phrase in (2.132a) would not give rise to any syntactical ungrammaticality as in (2.132b), the absence of *to*-phrase in (2.133a) leads to the ungrammaticality of (2.133b). One of the justifications for this syntactic contrast has been mentioned in Oehrle (1976). Following this, unlike (2.133a), there is no attempt of transferring the theme to the benefactor in (2.132a), and the action generated by the verb *buy* is merely an intention.

The last counted dissimilarity is the possibility of one preposition blocking the other although this is not always canonical. For instance, the sentence *John made the cake for Mary* will block PDCs \**John made the cake to Mary*, for instance. However, the reverse order is not true as dative verbs can go with *for* (e.g., *John sent a letter to Mary* versus *John sent a letter for Mary*) (Hawkins, 1987). Table 2.8 summarises the contrasts between the BA and the DA with respect to some main features.

**Table 2.8**

*Dative-Benefactive Distinction*

Features	Datives		Benefactives	
	PDCs	DODCs	PBCs	DOBCs
Syntax	<i>to</i> -NP	NP-NP	<i>for</i> -NP	NP-NP
Semantic roles of indirect objects	recipient	recipient	beneficiary	beneficiary
Thematic cores	theme movement	possession	beneficiary	possession/creation
Markedness	unmarked	marked	unmarked	marked
Inanimate themes	Yes	No	Yes	No
Nonalternating verbs	Yes	Yes	Yes	No

*Note.* Yes: The aspects exist in the given structure. No: The features do not exist in the given structure.



### 2.4.8 Vietnamese benefactive structures

This section puts forward some benefactive verbs in L1 to see whether there exist any syntactic similarities or differences between the two languages. I shall first start with some Vietnamese verbs whose counterparts alternate in L2 such as *mua* ‘buy’, *xây* ‘build’, *viết* ‘write’, and *kiếm được* ‘earn’ as in (2.134) to (2.137).

- (2.134) a. *Hoàng đã mua một món quà cho Hiền.*  
           Hoang PST buy a CLA gift for Hien  
           ‘Hoang bought a gift for Hien.’

- b. *Hoàng đã mua cho Hiền một món quà.*  
           Hoang PST buy for Hien a CLA gift  
           ‘Hoang bought Hien a gift.’

- (2.135) a. *Hùng đã xây một ngôi nhà cho Trang.*  
           Hung PST build a CLA house for Trang  
           ‘Hung built a house for Trang.’

- b. *Hùng đã xây cho Trang một ngôi nhà.*  
           Hung PST build for Trang a CLA house  
           ‘Hung built Trang a house.’

- (2.136) a. *Thanh đã viết một quyển sách cho Nga.*  
           Hung PST write a CLA book for Trang  
           ‘Thanh wrote a book for Nga.’

- b. *Thanh đã viết cho Nga một quyển sách.*  
           Thanh PST write for Nga a CLA book  
           ‘Thanh wrote Nga a book.’

- (2.137) a. *Nga đã kiếm được nhiều tiền cho Hoa.*  
           Nga PST earn obtain much money for Hoa  
           ‘Nga earned much money for Hoa.’

- b. *Nga đã kiếm được cho Hoa nhiều tiền.*  
           Hoang PST earn obtain for Hoa much money  
           ‘Nga earned Hoa much money.’

The above examples present some contexts in which English alternating verbs *build*, *buy*, and *write* seem to have their counterparts in Vietnamese. However, the individual distinction across two languages is that the preposition *cho* ‘for’ precedes the beneficiary in both Vietnamese variants, while this only occurs in English PBCs. Put differently, the fact that the preposition *cho* is present in both benefactive constructions indicates that Vietnamese benefactive verbs cannot enter the syntactic alternation without the help of the preposition *cho* ‘for’.

Like their correspondence in English, some Vietnamese PBCs are sometimes ambiguous and can be thus interpreted in various ways. On the first reading, for example, (2.134a-b) can be construed with a dative meaning in which Hoang bought a gift and then gave it to Hien. In another sense of benefactive, it could be inferred that Hoang bought a gift on behalf of her because she was too busy to buy a present, or she did not know how to choose a suitable gift (e.g., for her friend’s birthday). Interestingly, if we use a Vietnamese phrase like *giùm cho* ‘on behalf of’ as a replacement of *cho*, only one benefactive meaning is generated. This crosslinguistic syntactic similarity is also extended to other candidates belonging to verbs of creations (e.g., *nướng* ‘bake’, *làm* ‘make’, *thiết kế* ‘design’), verbs of performance (e.g., *vẽ* ‘draw’, *son* ‘paint’, *hát* ‘sing’), or verbs of obtaining (e.g., *đặt* ‘book’, *đạt được* ‘gain’). Based on these illustrations, I shall make a preliminary assumption that English alternating benefactive verbs do have their counterparts that alternate in Vietnamese.

Likewise, I am now moving to some L2 nonalternating benefactive verbs, e.g., *mượn* ‘borrow’ and *sáng tác* ‘compose’, with a view to seeing whether their L1 counterparts alternate or not.

(2.138) a. *Lan mượn một quyển sách cho Nga.*

Lan borrow a CLA book for Nga

‘Lan borrowed a book for Nga.’

b. *Lan mượn cho Nga một quyển sách.*

Lan borrow for Nga a CLA book

‘\*Lan borrowed Nga a book.’

(2.139) a. *Thành đã sáng-tác một bài hát cho Trinh.*

Thanh PST compose a CLA song for Trinh

‘Thanh composed a song for Trinh.’

- b. *Thành đã sáng-tác cho Trinh một bài hát.*  
 Hung PST compose for Trinh a CLA song  
 ‘\*Thanh composed Trinh a song.’

As can be seen in (2.138) and (2.139), while L2 verbs like *borrow* and *compose* cannot occur in the DOBCs, their equivalent verbs in L1 still alternate. This lack of syntactic consistency is expected to cause the VLEs some problems when they transfer the construction in their L1 to the L2. This phenomenon also applies to other verbs belonging to the *obtain*-type subclass (e.g., *thu thập* ‘collect’, *mua* ‘purchase’, *nhận* ‘receive’). Consider other examples with *chọn* ‘select’, *tạo* ‘create’, and *đòi* ‘recover’, as illustrated in (2.140) to (2.142).

- (2.140) a. *Tùng đã chọn một ngôi nhà cho Lan.*  
 Tung PST select a CLA house for Lan  
 ‘Tung selected a house for Lan.’  
 b. *Tùng đã chọn cho Lan một ngôi nhà.*  
 Tung PST select for Lan a CLA house  
 ‘\*Tung selected Lan a house.’
- (2.141) a. *Tinh đã tạo một công-việc cho Nga.*  
 Tinh PST created a job for Nga  
 ‘Tinh created a job for Nga.’  
 b. *Tinh đã tạo cho Nga một công-việc.*  
 Tinh PST created for Nga a job  
 ‘\*Tinh created Nga a job.’
- (2.142) a. *Quang đã đòi một món nợ cho Uyên.*  
 Quang PST recovered a CLA debt for Uyen  
 ‘Quang recovered a debt for Uyen.’  
 b. *Quang đã đòi cho Uyên một món nợ.*  
 Quang PST recover for Uyen a CLA debt  
 ‘\*Quang recovered Uyen a debt.’

Still, a lack of consistent variations is found for nonalternating benefactive verbs and their counterparts with *select*, *create*, and *recover*. Specifically, although these verbs are all nonalternating, their correspondences are syntactic alternators.

In one word, Vietnamese and English have syntactic similarities regarding the PBCs. However, the two languages differ in terms of the DOBCs which are licenced by the preposition *cho* in L1 Vietnamese. Hence, syntactic incongruence of the DOBCs between the two languages can impose a complicated problem to learners' acquisition of benefactive structures.

### 2.4.9 Previous SLA approaches to benefactive structures

The benefactive structures<sup>18</sup> have received much attention SLA studies. Generally, the benefactive studies mainly focus on the following aspects: markedness (Ariamanesh & Shojai 2018; Hawkins, 1987, Mazurkewich, 1984; Zeybek, 2018), asymmetries of DOCs (Agirre, 2015; Oh, 2010; Oh & Zubizarreta, 2005), and morphological and semantic constraint (Rezai, 2010).

#### 2.4.9.1 Research on markedness

One of the early studies on this approach is Mazurkewich (1984), which employed three groups of French L1 learners (23 beginners, 7 intermediates, and 15 advanced learners), and three groups of Inuktitut L1 speakers (12 beginners, 8 intermediates and 18 advanced learners). Two control groups of speakers were also involved: a younger subject group (mean age: 12.3) and an older subject group (mean age: 15.6). A GJT was conducted for a set of stimulus items containing five alternating benefactive verbs (i.e., *bake*, *buy*, *choose*, *make*, and *save*) and three PBC-only verbs (i.e., *capture*, *create*, and *design*). All the experimental stimuli fell into five categories, as described in Table 2.9. The participants were asked to put an 'X' next to any item that they thought was ungrammatical.

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<sup>18</sup> Some studies (i.e., Agirre, 2015; Hawkins, 1987; Mazurkewich, 1984) in this section have been reviewed in Experiment 1 (Section 2.3.7) regarding the dative. For the objectives of this experiment, these studies are re-discussed in terms of benefactive-related content and its correlation with the dative (if applicable).

**Table 2.9***Types of Experimental Items*

Types	Examples
Type 1: PBCs with alternating verbs	Diane baked a cake for Nicole.
Type 2: DOBCs with alternating verbs	Diane baked Nicole a cake.
Type 3: PBCs with nonalternating verbs	Anne created a costume for Sarah.
Type 4: DOBCs with nonalternating verbs	* Anne created Sarah a costume.
Type 5: Distractors	Patrick rescued Lisa from drowning.

The collected data, as in Table 2.10, from all groups reveal that there was a high percentage of correct answers across the groups with regard to Type 1 and Type 3, whereas Type 2 and Type 4 show decreasing judgement of acceptability. For Type 2, the Inuit groups had higher correct proportion than the French counterparts.

**Table 2.10***Percentage of Correct Answers across Groups*

Group	Percentage of correct answers			
	Type 1	Type 2	Type 3	Type 4
Control groups				
Group 1 (n = 6)	96.7	93.3	100	38.9
Group 2 (n = 6)	100	86.7	100	72.2
Experimental groups				
French group 1 (n = 23)	96.6	41.8	98.6	69.3
French group 2 (n = 7)	100	54.3	90.5	71.4
French group 3 (n = 15)	98.7	81.3	95.6	48.6
Inuit group 1 (n=12)	98.3	75.0	94.4	66.7
Inuit group 2 (n=8)	97.5	92.5	95.8	50.0
Inuit group 3 (n=8)	100	84.4	100	46.3

Mazurkewich concludes that the PBC is acquired before the DOBC, and this sequence reflects an aspect of UG. Overall, the acquisition of PBC seems to lag behind that of PDC. Additionally, this acquisitional sequence might be generated from the similar PPs in French and English.

Given that Mazurkewich's (1984) dataset was too small to go over the benefactive construction, Hawkins (1987) reexamined the effects of markedness by broadening the range of verbs. He used two tasks (i.e., a GJT and a sentence construction task) for a group of 10 French L1 participants. The GJT tested three types of verbs: (i) monosyllabic alternating verbs (*bake, buy, choose, fry, save*), (ii) polysyllabic alternating verbs (*prepare, reserve*), and (iii) polysyllabic PBC-only verbs (*capture, create, design, open*). Each verb had two passive declarative forms, as in (2.143) and (2.144).

- (2.143)        a. A sweater was made for Jerry.  
                  b. Jerry was made a sweater.

- (2.144)        a. A prize was captured for Canada.  
                  b. \*Canada was captured a prize.

In Task 2 (i.e., the sentence construction task), the participants were given an incomplete sentence like *John cook Mary a meal*. They were then asked to conjugate the main verb in the simple past tense (this was a distractor) and insert the preposition *for* only if necessary. The benefactive verbs used in this task were also divided into three types: (i) monosyllabic alternating verbs (i.e., *build, buy, cook, carve, save, and spare*), (ii) polysyllabic alternating verbs (i.e., *order, prepare, and reserve*), and (iii) polysyllabic nonalternating verbs in PBCs only (i.e., *accept, construct, and review*). In the GJT, the results showed more correct acceptability of PBCs construction than DOBCs for the same verb. That is, from 95% to 100% of participants judged PDCs grammatically. In the written task, the participants' performance also reflected their judgements on Task 1. That is, for each of the same verb in both tasks, the proportion of judgment on DOBCs was the same.

The data patterns from findings anew confirmed the developmental sequence in Mazurkewich's study (i.e., PBCs are acquired prior to DOBCs). Hawkins further found a relationship in relation to the acquisition between the DA and the BA. Regarding the double-object forms, there was a greater degree of acceptability of dative verbs than benefactive verbs. For example, in the case of alternating verbs, 78.8% of dative verbs, compared with only 23.1% of benefactive verbs, in the NP-NP patterns were judged or produced grammatically by 50% or more by the participants.

In connection with the prepositional forms in the GJT, nearly 90% to 100% of the participants judged the patterns grammatically. However, in the written task, their judgments were different. That is, the participants with near-native acceptability in the GJT tended to produce the preposition *for* in PBCs, whereas those with lower performance tended to use *to* instead of *for* in PDCs. In light of these findings, Hawkins suggested the developmental acquisition of English BA by L1 French subjects: (i) the acquisition of PBCs precedes the acquisition of DOBCs, (ii) the acquisition of DODCs precedes the acquisition of DOBCs, and (iii) the acquisition of PDCs precedes the acquisition of PBCs.

Hawkins then argued that the acquisitional order found in Mazurkewich's (1984) study was not the only factor which accounted for the acquisition of BA and this was only a stage in the acquisitional sequence. Otherwise stated, the acquisition process proposed by Hawkins was quite complicated and could not be explained by the markedness theory per se. Therefore, a better attribution to this process in terms of the familiar psycholinguistic is a notion of *learning complexity*, which is understood that (i) learners initialised with a broad distinction between pronominal datives (e.g., *I sent him the book*) and lexical datives (*I sent John the book*), (ii) this process is then refined by the contrast between dative and benefactive verbs, and (iii) the process is then subsequently refined by the presentation of the distinction between native and nonnative verb syntax. Hawkins states that the dative and benefactive verbs are acquired between stages 1 and 2 because of the positive evidence of the PDCs and the PBCs.

#### **2.4.9.2 Research on L1 transfer**

Like the dative structures, language transfer also plays a crucial role in helping learners to acquire the benefactive structures, which has drawn much attention from many linguists. In the area of the morphology transfer, Oh and Zubizarreta (2005) investigated the acquisition of DODCs and DOBCs by Japanese and Korean learners. Given that Korean and Japanese have the benefactive verbal morphology *cwu-* and *ageru*, respectively, their study aimed to explore an L1 transfer effect of overt morphology on the acquisition of DOCs in dative and benefactive constructions. Two groups of control participants were involved in the study: 65 L1-Korean learners of English (mean age: 28.38), and 52 L1-Japanese learners of English (mean age: 25.13). Each control group was divided into three different levels of English (beginners, low

intermediates, and high intermediates) on the basis of their cloze test scores. To be qualified for the study, all learners were required to translate test verbs into their native language in a vocabulary translation task in order to make sure that they were familiar to all of the target verbs used in the experiment. There was one more control group of 11 NSs (mean age: 28.64). To achieve the aim, the target sentences totaled 20 pairs which were formed from 10 dative verbs (*bring, hand, send, show, throw, explain, repeat, say, shout, whisper*) and 10 benefactive verbs (*buy, draw, find, get, make, hold, keep, finish, fix, watch*). Each verb was tested in two dative variants. The participants were asked to evaluate the grammaticality of all sentences from -3 (completely unnatural) to +3 (completely natural), and they were also required to provide corrections for negative scores. The findings revealed that all learners (particularly the low and high intermediates) in both experimental groups rejected the DOBCs more strongly than DODCs regardless of licit or illicit constructions. The authors suggested three reasons for these findings. Firstly, these results were attributed to L1 due to a lack of benefactive morphology in L2, and the benefactive morphology in Korean and Japanese does have an effect on the learners' acquisition of the DODCs and DOBCs. Secondly, another assumption stemmed from a frequency-based explanation which claims that the DODCs have more occurrences than the DOBCs in learners' input. However, they note that this account was insufficient to explain the rating differences of illicit DOCs. The last reason came to a lexical-based explanation which states that the DODCs are inherently transitive and the DOBCs are inherently transitive. Seen in this light, the benefactive is an argument of the light verb in Japanese (*cwu-*) and Korean (*ageru*).

In another related study by Oh (2010), L1 adult Korean speakers were examined whether they could acquire the possession constraint of DODCs and DOBCs in English. She argues that Korean and English have parallel syntax and semantics regarding the DODCs. However, the Korean DOBCs are associated with a general benefactive construal and only exist with the presence of *cwu-*. Oh thus hypothesised that (i) the DODCs were acquired prior to the DOBCs, and (ii) the acquisition of the DODCs bootstrapped the acquisition of the DOBCs. In this fashion, the study comprised an experimental group of 33 Korean speakers (age mean: 28.4) and a control group of 11 native English speakers (age mean: 22.9). The L2 Korean learners were classified into three proficiency groups (12 beginners, 9 intermediate, and 12 advanced). A context-based GJT was employed to collect data by means of three dative



verbs (*send, bring, take*), and three benefactive verbs (*find, pour, make*). All target verbs appeared in two different discourse contexts, and only one of which satisfied the possession constraint. In every context, each verb appeared in two benefactive constructions and the participants had to rate the acceptability of the context-based structures via a four point-Likert scale. The findings supported the hypotheses in that DODCs are acquired before DOBCs. These results indicate that learners were capable to overcome the negative transfer. Another account for this is a lexical-based explanation which is stemmed from the framework of Construction Grammar. In this respect, benefactive verbs in English are inherently transitive verbs, and DOBCs are less typical cases because of a mismatch between arguments and their structure. Meanwhile, DODCs are regarded as prototypical cases, and there is a one-to-one correspondence between arguments and their structure (Goldberg, 2002).

Zara et al. (2013) then conducted similar research into Brazilian learners' acquisition of English DOCs. The representations of dative structures differ in some aspects between the two languages. In Brazilian Portuguese, the non-pronominal recipient plays the role of an object of the overt preposition. Hence, the sentence like *He gave John a book* is likely to impose learning difficulties for learners. Nevertheless, the learners would not have difficulties for sentences like *He gave me a book* or *He gave a book to Mary* due to analogy between the two languages. Also, the sentence with pronoun in pre-verbal position, like *\*He me gave a book*, is grammatical in Brazilian Portuguese, thus being transferred to the interlanguage of beginners. The study recruited 62 Brazilian Portuguese at three varied levels of proficiency. The materials included four alternating benefactive verbs (*build, buy, make, find*), and seven alternating dative verbs (*bring, give, hand, offer, promise, teach, tell*). The results showed that there was an effect of language proficiency on the acceptance of the DOCs. The increased level of English led to the increased acceptability in DOCs (irrespective of NPs or pronouns). The acceptance in DOCs with pronouns was higher than that in DOCs with NPs in all groups of participants, but only the advanced group was found to attain the native-like competence in both types of DOCs. With respect to pre-verbal pronoun sentences, the results were not in support with the hypothesis that experimental participants of all levels correctly rejected this type of structure. For the last hypothesis, there was a higher acceptance of the NP-PP patterns over the DOCs, and all learners had native-like grammar for NP-PP patterns owing to either markedness or positive language transfer. The L1 transfer or L2 input frequency was

attributed to learners' acquisition of DOCs with pronouns. In case of pre-verbal pronouns, the learners' correct rejection was supported by Kellerman's (1983) psychotypological perceptions that linguistic transfer is constrained by either tacit or explicit impressions.

Shortly afterwards, Agirre (2015) scrutinised the acquisition of the dative and benefactive structures by Spanish ESL learners. This study aimed at examining (i) whether learners are sensitive to asymmetries of DOCs between dative and benefactive verbs, (ii) whether learners are sensitive to semantic and morphological constraints, and (iii) whether learners' language proficiency has an effect on the acquisition of DOCs. The DODCs are similar in both English and Spanish, though Spanish DOCs can be used with a wider range of verbs, and benefactive verbs are restricted to the possessor constraint. All the materials in this study were taken from Oh (2010). There were 36 experimental items equally divided into PBCs and DOBCs variants, as illustrated in Table 2.11 (Agirre, 2015, p. 73)

**Table 2.11**

*Tested Benefactive Verbs*

Latinate verbs	Exceptional verbs	Control verbs
construct	solve	build
collect	keep	draw
obtain	fix	get
create	open	fix
select	finish	buy
design	wash	find

A total of 18 benefactive verbs were equally divided into three conditions: the structural condition, the morphological constraint condition, and the semantic constraint condition. Latinate verbs were used to test the morphological condition; exceptional verbs are PBC-only verbs which were used to test the semantic constraint in DOBCs; and the control verbs were used to test whether the subjects were sensitive to PBCs or DOBCs. To this end, one APRT (Task 1) and one SPRT (Task 2) were utilised to analyse whether there are structural similarities and differences affecting

learners' accuracy and reaction delays. All items were rated in a seven-point Likert scale from 1 "completely acceptable" to 7 "completely unacceptable". The materials used in both tasks were the same. Ninety adult Spanish ESL learners (age range: 18-28) were equally divided into three proficiency levels: elementary, intermediate, and advanced. This classification was founded on their achievements of Oxford Placement Test. Also, 30 adult native English speakers (age range: 21-25) were involved.

In response to the first research question, the findings from the first task revealed that the intermediate and advanced learners had higher accurate responses in PBCs than DOBCs. However, this tendency was converse for the beginners due to L1 transfer effects or the overgeneralisation. By contrast, in the second task, there were different evaluations across three groups: similarities in evaluating PBCs and DOBCs (for the elementary group), more accuracy of DOBCs than PBCs (for the intermediate group), and more accuracy of PBCs than DOBCs (for the advanced group). However, the higher level the learners had, the more aware of language specific constraints they became.

In respect of semantic and morphological constraints, the results in the first task showed that learners in all groups were more accurate in DOBCs of control verbs than those of Latinate and exceptional verbs. In the second task, similar outcomes to the first task were found for the elementary group. However, when the proficiency proliferated, there were more accuracy of DOBCs in control conditions than in the other conditions. These findings seemed to support full transfer hypothesis because of similar possessor constraint in the two languages. In addition, the overgeneralisation effects also accounted for this outcome.

For the last research question relating to proficiency effects, in both timed and untimed tasks, the findings confirmed that advanced learners consistently outperformed the other two groups in all conditions. By contrast, there was no difference between the two lower groups in any of the conditions. The evidence of markedness is not always lucid. This constraint is contingent on many factors such as learners' proficiency, or the research instrument. For instance, the results demonstrated that learners were more accurate in PDCs than DODCs in the intermediate and advanced groups regarding the APRT. However, in the SPRT, the mixed outcomes were experienced as there was no significant difference in performance in the elementary group, but the intermediate learners were more accurate in DODCs than PDCs. Conversely, an opposite tendency was found for advanced learners.

In a few words, like the dative structures in Experiment 1, the acquisition of benefactive structures is still affected by markedness (Hawkins, 1987; Mazurkewich, 1984; Zeybek, 2018) in which the PBC was acquired prior to the DOBC. In particular, the effect of benefactive morphology and frequency-based explanation was proved to shape the acquisitional order in which the DODC was acquired prior to the DOBC (Oh, 2010; Oh & Zubizarreta, 2005), or there was an effect of language proficiency on acceptance of the DOC (including DOBCs and DODCs) (Zara et al., 2013).

#### **2.4.10 Implications for addressing the research gap**

The studies reviewed above have certain limitations and gaps that create the need for further research:

Firstly, the investigation of the BA has been amply demonstrated by numerous previous researchers, although its focus in the domain of SLA is not as much as dative. Still, only a limited number of studies on this construction have examined it separately from the DA; rather, most researchers tended to integrate the dative and benefactive constructions in one study (e.g., Agirre, 2015; Mazurkewich, 1984, 1985). Hence, this type of construction needs intensive and independent scrutiny.

Secondly, some methodological shortcomings of the existing research still exist. For example, Mazurkewich's study faces many problems. The sample size in each level was quite small so the results could not be generalised to the wider L2 population. Plus, the significantly mismatched numbers of participants amongst the levels (i.e., 23 French beginners cf. 6 NSs) also detract from the validity of cross-population comparisons. On top of that, Mazurkewich's range of PBC-only nonalternating verbs was not wide enough, so the results could not be apparently generalised to items of this type more broadly. The last problem is that some issues call into question the credibility of the choice of *choose*. This verb is listed as either an alternating or nonalternating verb depending on its context (Levin, 1993), and many speakers find the sentence like *?I chose you a book at the library sale* quite odd (Bowerman, 1987, p. 448).

Thirdly, the approach of exploring pairs of synonymous alternating-nonalternating verbs has never been adopted in research on the BA. Many previous researchers (e.g., Hawkins, 1987; Mazurkewich, 1984, among the others) went over the benefactive verbs which were only founded on their properties (e.g., monosyllabic/

polysyllabic verbs, alternating/ nonalternating verbs) but neglecting the semantic comparison. For example, *build* and *construct* are claimed to have the same syntax by the VLEs due to their synonymy. Hence, it was quite rash for the experimenters to determine any overgeneralisation of the nonalternating verb subclasses. Mazurkewich (1984) concluded that the overgeneralisation was made for verb type 4 (i.e., illicit DOBCs), whereas the meanings across the verb types were not tightly connected together, for example.

Finally, to the best of my knowledge, there has been so far no reported research examining the acquisition of the BA in the Vietnamese setting. The acquisition of the BA has been explored with ESL/EFL learners from various non-Vietnamese L1s: Brazilian Portuguese (Zara et al., 2013), French (Hawkins, 1987; Mazurkewich, 1984), Japanese (Oh & Zubizarreta, 2005; Whong-Barr, & Schwartz, 2002), Korean (Oh, 2006, 2010; Oh & Zubizarreta, 2005; Whong-Barr, & Schwartz, 2002), Persian (Ariamanesh & Shojai, 2018), and Spanish (Agirre, 2015). This gap leaves open the question of whether, and in what ways, VLEs' acquisition of the BA will be affected by L1 transfer, markedness, and the morphological constraint.

## **2.5 Experiment 3: The locative alternation**

### **2.5.1 Learnability problems**

The last experiment goes over the acquisition of the LA. This is one of the argument-structure alternations that have undergone thorough scrutiny by the linguists for decades (e.g., Fraser, 1971; Levin, 1993; Pinker, 2013; Salkoff, 1983; Schwartz-Norman, 1976; Talmy, 1972). Consider sentence transformations in (2.145) to (2.147):

- (2.145)      a. Lee loaded plants onto the truck.  
              b. Lee loaded the truck with plants.
  
- (2.146)      a. \*He filled the water into the bottle.  
              b. He filled the bottle with water.
  
- (2.147)      a. She poured paint into the bucket.  
              b. \*She poured the bucket with paint.

Verbs like *load*, *fill*, and *pour* which involve semantic roles Agent, Figure, and Ground are amongst the most common in English (Bowerman, 1982, p. 336). It can be generally realised that *load*, *fill*, and *pour* have similar semantics encoded in an activity in which an agent is going to make a container full of stuff. Following the contexts from (2.145) to (2.147), the truck is going to be fully stocked with plants, the bottle is going to be filled up with water, and the bucket is about to be full of paint, accordingly. Irrespective of the similar readings, the above syntactic discrepancy is likely to raise some learnability problems for the learners. As such, (2.146a) and (2.147b) can be overgeneralised from (2.145a) and (2.145b), respectively.

Another problem is that the LA is significantly different from the datives and the benefactives discussed in Experiments 1 and 2. More specifically, the two patterns in each of the dative and benefactive constructions are related to each other by similar mechanical transformation, in which the two functions, in essence, are inverses of each other with ditransitive verbs (Pinker, 2013). Locative verbs are also known to associate with several variants in their argument structure (Yakhabi et al., 2018). All these locative features could pose some setbacks for many L2 learners (Bowerman, 1982; Lee, 2009). Hence, the purposes of this experiment are to find out whether the VLEs can acquire these syntactic differences, and which factors facilitate or hinder this acquisitional process.

## 2.5.2 Syntactic and semantic properties of English locative structures

### 2.5.2.1 The locative syntax

Within the framework of linguistic typology, a locative construction is normally formed by a large set of transitive verbs (e.g., *load*, *spray*, and *smear*) that are normally associated with three types of arguments: Agent, Figure, and Ground (elsewhere known as Goal or Location). Some other locative constructions are formed by intransitive verbs (e.g., *clear*, *swarm*)<sup>19</sup>. The variants of such alternation pose a so-called “locative alternation”, as in (2.148).

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<sup>19</sup> Levin (1993, pp. 50-55) categorised five types of locative alternations: spray/load alternation (e.g., *brush*, *load*, *spray*), clear alternation (e.g., *clear*, *delete*, *steal*), wipe alternation (e.g., *dust*, *erase*, *wipe*), swarm alternation (e.g., *gather*, *herd*, *swarm*), and clear alternation (e.g., *clear*, *drain*, *empty*). Apart from the spray/ load alternation, the others are beyond the scope of this study.

- (2.148)      a. John loaded cargo **onto the vessel**. (FOC)  
                  b. John loaded the vessel **with cargo**. (GOC)

Intuitively, unlike the datives or benefactives where an object permutation is generated, both locative variants are associated with a direct object and an NP in an oblique position. The given mapping applied to (2.148) depicts the same event as both readings involve the relocation of an entity to a new location through the action of an agent. The LA thus occurs when there is a swap of Figure (e.g., a substance or a physical object) and Ground (e.g., a goal, a surface, a receptacle, or an anchorage point) in two syntactic patterns, producing two syntactic representations which are considered to be near-paraphrase (Cifuentes Honrubia, 2008; Gropen et al., 1991; Kordoni, 2006; Laffut, 2006; Laffut & Davidse, 2002; Levin & Hovav, 1991; Pinker, 2013). In (2.148), *John* is Agent, *cargo* is Figure<sup>20</sup>, and *vessel* is Ground. Syntactically, *cargo* is the direct object, and *the vessel* is headed by the locative preposition *onto* in (2.148a). Inversely, Ground becomes the direct object, and Figure is an oblique marked by *with* in (2.148b). Two variants in (2.148) are thus referred to as a figure-object construction (henceforth, FOCs)<sup>21</sup> and a ground-object construction (henceforth, GOCs), respectively. The bold PPs in (a) and (b) are called *locative-PP* and *locatum-with*, accordingly.

Many other *load*-type verbs (e.g., *pile*, *heap*, *spray*, *stack*) happen in two frames as in (2.149) and (2.150), and share the related semantic meaning and syntax with each

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<sup>20</sup> In much of linguistic literature, apart from Figure and Ground (Bley-Vroman & Joo, 2001; Kim et al., 1999; Talmy, 1972), *cargo* and *vessel* are also known as Locatum and Location (or goal) (Beavers, 2006; Kim, 1999; Kordoni, 2006; Lumsden, 1994; Rappaport & Levin, 1988; Wang, 1998), or Locational Theme (content) and Locational Goal (container) (Pinker, 2013), respectively.

<sup>21</sup> Since Figure and Ground are known with other different names, various conventions of locative variants have been attached with these two names. That is, FOCs and GOCs respectively are also called locational sentences and device sentences (Fraser, 1971; Wang, 1998), locative variants and with-variants (Levin & Hovav, 1998), content-object sentences and container-object sentences (Gropen et al., 1991), into/onto-variants and with-variants (Goldberg, 2002), locatum-as-object variants and location-as-object variants (Iwata, 2008; Kim, 1999), and figure-frames and ground-frames (Bullock, 2004; Kim et al., 1999; Lee, 2009).

other. However, such transposition is not possible for all verbs. Rather, some are only compatible with either FOCs or GOCs, as exemplified from (2.151) and (2.152).

- (2.149)      a. Mary heaped food on her plate.  
              b. Mary heaped her plate with food.

- (2.150)      a. Tim sprayed paint on the walls.  
              b. Tim sprayed the wall with paint.

- (2.151)      a. I dripped paint on the floor.  
              b. \*I dripped the floor with paint.

- (2.152)      a. \*She filled water in the bucket.  
              b. She soaked the bucket with water.

Verbs like *push* or *drip* that are only mapped to FOCs are called figure-verbs, while verbs like *soak* or *fill* that are used exclusively in GOCs are called ground-verbs<sup>22</sup>. Other locative verbs that are compatible with both variants are called alternating locative verbs. Alternating verbs can be further subdivided into two groups<sup>23</sup> which follow two rules operating in different directions; this mapping is grounded on which argument is optional or obligatory in the construction, as in (2.153) - (2.154) (Pinker, 2013, p. 146).

- (2.153)      a. He piled the books.  
              b. \*He piled the shelf.

- (2.154)      a. \*He stuffed the breadcrumbs.  
              b. He stuffed the turkey.

If the PP is optional in FOCs, we have figure-alternating verbs (e.g., *load*, *pile*, *spray*),

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<sup>22</sup> Ground verbs are also known as *with*-verbs or container verbs.

<sup>23</sup> For this study, I am not going to separate alternating verbs. Rather, both figure- and ground alternating verbs are merged into one type, namely alternating verbs.



as in (2.153). Conversely, we have ground-alternating verbs (e.g., *paint*, *stuff*, *wrap*) if the PP is optional in FOCs, as in (2.154). When the Figure is obligatory, it is assumed that GOCs are derived from FOCs, as in (2.153). Otherwise, FOCs are derived from GOCs, as in (2.154). On the other hand, when both arguments are optional, the derivation could have gone in either direction, as in (2.155) (Pinker, 2013, p. 146).

- (2.155)        a. He loaded the bullets.  
                  b. He loaded the gun.

Syntactically, both locative patterns permit two passive sentence forms and either of the noun phrases to be questioned (Fraser, 1971), as in (2.156) - (2.157). For example, (2.157) corresponds to (2.156a).

- (2.156)        a. Cargo was loaded onto the vessel.  
                  b. The vessel was loaded with cargo.
- (2.157)        a. What did John load onto the vessel?  
                  b. Where did John load the vessel?

However, the locative variants also differ in some ways regarding the syntax; these are listed from (i) to (iv) below. Consider (2.158) to (2.161) (adapted from Fraser, 1971, pp. 604-607).

- (i) The prefix *over* can only be used with a verb in GOCs.

- (2.158)        a. \*John overloaded cargo onto the vessel.  
                  b. John overloaded the vessel with cargo.

- (ii) The preposition *up* only combines with the verb in GOCs.

- (2.159)        a. \*John loaded up cargo onto the vessel.  
                  b. John loaded up the vessel with cargo.

- (iii) Certain phrases can only occur with one specific construction.

(2.160) b. He planted (\*full of) flowers in the back yard.

a. He planted the back yard with/full of flowers.

(2.161) a. He loaded the carts (one by one) onto the vessel.

b. He loaded the vessel with the carts (\*one by one).

(iv) The co-occurrence restrictions of the two locative variants are not always identical. For example, the GOCs are more restrictive than the FOCs because of different article usage in the NPs headed by *with* as in (2.162b-c). However, when these NPs are in the direct object position as in (2.162a), the article usage is more flexible.

(2.162) a. He loaded a cart/ carts/ the carts onto the vessel.

b.\*He loaded the vessel with a cart.

c. He loaded the vessel with (?the) carts.

### 2.5.2.2 The locative semantics

In most of the literature, the choice of a single locative variant is not fortuitous, and this has its roots in their distinct semantics. For instance, while *cargo* is focused in (2.148a), *the vessel* is more focused in (2.148b). Put differently, John did something with the cargo in (2.148a), but he did something to the vessel in (2.148b) (Juffs, 1996a; Rowlands, 2002). Another perspective is that the movement of the cargo to the new destination (i.e., the vessel) is entailed in (2.148a), whereas such reading cannot be found in (2.148b) where the vessel is understood as being affected by the movement of the cargo. Overall, locative semantics is construed as either *change of location* in FOCs or *change of state* in GOCs (Iwata, 2008; Levin & Hovav, 1998; Moravcsik, 2006; Pinker, 2013; Rappaport & Levin, 1988). Additionally, some locative sentences (e.g., *John put the tablecloth on the table*) can be construed by both weak and strong readings (Beavers and Nishida, 2010, p. 226). While the weak meaning is involved with the location of the tablecloth, the strong meaning deals with the activity of covering.

It is widely recognised that the *change of state* can be understood when the ground in the direct position is entirely filled up. Following this standpoint, the ground

is completely *filled*, *covered*, or *saturated* with the material (Pinker, 2013), and this interpretation is bound up with the so-called “holism/ partitive effect”<sup>24</sup> (Beavers and Nishida, 2010; Bowerman, 1982; Goldberg, 1995; Iwata, 2008; Kordoni, 2006; Levin, 1993; Pinker, 2013; Rappaport & Levin, 1988; Schwartz-Norman, 1976). This theory has, therefore, received a wealth of attention from the previous literature. This effect has been used to clarify the ill-formed items in (2.163) and (2.164), as quoted from Beavers (2006, p. 48).

- (2.163)      a. John loaded the hay onto the wagon, but left some space for the grain.  
                   b. John loaded the hay onto the wagon, filling the wagon all up.  
                   c. \*John loaded the wagon with the hay, but left some space for the grain.
- (2.164)      a. John loaded the wagon with the hay, but left some hay to fill the truck.  
                   b. John loaded the wagon with the hay, moving every last straw.  
                   c. \*John loaded the hay onto the wagon, but left some hay to fill the truck.

The basic contrast readings above come from the distinctive positions of the figure and the ground. When the ground is in a PP position, as in (2.163a-b), it is not necessary for the wagon to be filled up. Nevertheless, the interpretation of not being filled up cannot be found in (2.163c). In the same vein, if the figure is in the oblique position, as in (2.164a, b), it can be implied that all of the hay has been fully moved or partly moved. By contrast, in (2.164c), all of the hay must be loaded.

Yet, some issues still remain regarding the state of completeness in GOCs. Following Dowty (1991), *John loaded the wagon with the hay* is appropriate when the amount of hay perfectly fits the space on the wagon. In Dowty’s study, the figures (i.e., *the hay*) in (2.163a-b) and the grounds (i.e., *the wagon*) in (2.164a-b) are called the incremental themes. Consider another example, (2.165) (Jackendoff, 1996, p. 346).

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<sup>24</sup> This term has some alternatives, such as *completiveness* (Jackendoff, 1990) or *wholistic* (Lumsden, 1994).

- (2.165)
- a. John sprayed/smeared/dabbed/splashed the wall with paint (for ten minutes), but it still wasn't covered.
  - b. ?Bill loaded the truck with dirt for an hour, but there was still room for more.
  - c. ?Bill crammed/packed the crack with cement (for five minutes), but it still wasn't full.

In (2.165a), it is not necessary for GOCs to be the end-point, whereas in (2.71b-c), the verb implies that the truck or the crack will eventually be filled – in other words, there is an endpoint. Another point of view (e.g., Schwartz et al., 2003) for this contrary is that there is integrative predication (any coverage of the wall) in (2.165a), and summative predication (all parts of the truck loaded) in (2.165b-c). The holism effect is thus much stronger in (2.165b-c). They then suggest that holism is a complex phenomenon, and this should be used in the right syntax.

Yet, the meaning of GOCs is not always restricted to *change of state* because this structure can be interpreted in different ways when used with various verb subclasses. The GOCs can be thus handled in a non-uniform way, as in the case of *spray* in (2.166).

- (2.166)
- a. I sprayed paint on the wall.
  - b. I sprayed the wall with paint.

Both readings in (2.166) are describing the same event. As in aforementioned discussion, Figure *paint* and Ground *wall* are focused on the first and second readings, respectively. The action of *spray*, semantically, involves sending small drops of liquid (e.g., paint, water, chemical) through the air, typically in a back and forth manner. In (2.166a), the event is about sending a substance of liquid in a mist, but an event of covering the wall with paint is the focus in (2.166b). Hence, in the sense of GOCs, the semantics of *spray* is likened to that of *cover* rather than *change of state*. Following this explanation, *load*- and *cram*-type verbs are featured as *fill* semantics, and the *pile*-class can be characterised regarding *cover* or *fill* semantics (Iwata, 2008, p. 34).

In another account, Goldberg's (1995) constructional approaches refer that GOCs can be considered as a causative construction plus *with*-adjunct when she

discusses *load* and *spray* alternations. Consider a quoted example (2.167) from her study (Goldberg, 1995, p. 175).

(2.167) Pat sprayed the statue with paint.

The example (2.167) is treated as a causative construction in the way that Pat completely covered the statue with paint, or perhaps he has vandalised the statue. In this sense, the PP is an adjunct and closely associated with *with*-phrase of instrumentals.

Regarding the markedness of the locative variants, although FOCs with *load* seems to be more basic than GOCs, there is no clear evidence that one pattern is more common than the other for other verbs (e.g., *plaster*, *stack*) (Goldberg, 1995; Laffut & Davidse, 2002). Nevertheless, Laffut and Davidse argue that FOCs are the most common, and more general common variant because numerous statal passives are subsumed in this structure.

### 2.5.2.3 “Locatum-with” and “Instrumental-with”

In dealing with the locative construction, it is essential to spotlight syntactic realisation of the *with*-phrases. Much realised from the literature, the instrumental-with, however, is an adjunct and it is differently treated from the locatum-with (Iwata, 2008; Goldberg, 2002; Van Valin & LaPolla, 1997). From Iwata’s (2008) viewpoint, these two terms are syntactically different in some ways: (i) these two PPs can co-occur in a syntax (e.g., *Mary loaded the wagon with hay with a pitchfork*), (ii) the instrumental-with is only placed after the locatum-with (*\*Mary loaded the wagon with a pitchfork with hay*), and (iii) adverbs of manner can go between a direct object and instrumental-with as in (2.168a), but they cannot be inserted between a direct object and locatum-with, as in (2.168b) (Iwata, 2008, p. 46).

- (2.168) a. Sam loaded the wagon quickly with a fork.  
b. ??Sam loaded the wagon quickly with hay.

However, the distinction of instrumentals and non-instrumentals is not always clear,

and there is usually some grey area, as in (2.169) (Goldberg, 2002, p. 340).

- (2.169)        b. Tim wrapped the box with a paper.  
                   c. Tim broke the mirror with a stone.

#### 2.5.2.4 The English locative prepositions

Before going further into the locative verbs in English, it is worth considering some various types of prepositions used with these verbs, as acquiring locative constructions necessitate the proper uses of the locative prepositions. As stated earlier, the locative is quite complicated since a bewildering variety of prepositions are used in the two variants. The movement of the figure to the new ground in FOCs can be introduced not only by frequent prepositions such as *on/onto* or *in/into*, but also by a number of other prepositions, such as *along*, *across*, *over*, *around*, *toward*, *under*, *down (in)*, and *between* (Laffut, 2006, p. 220; Salkoff, 1983, p. 288), as listed in Table 2.12.

**Table 2.12**

*Prepositions Used in Locative Variants*

Locative Verbs	Prepositions used in FOCs	Prepositions used in GOCs
cram, flood, hang, heap, load, pack, pile, shower, spatter, splash, splatter, spray, sprinkle, stack	onto	with
brush, emboss, embroider, engrave, etch, imprint, inflict, inscribe, letter, mark, saddle, stamp	on	with
clean, clear, drain, empty	out of	of
clean, clear, trim, prune	off of	of
con, rob	from	of
abound, plant, sow, swarm	in	with
cram, load, pack, stock, stuff, wad	into	with
credit, furnish, pay, present, provide, serve, supply,	to	with
blame	on	for
wrap	around	in/ with

Table 2.12 lists common prepositions (Fraser, 1971, p. 605) which accompany some verbs in locative variants. The aforementioned list is not exhaustive and several other types of locative verbs and prepositions can be added. Apparently, one verb can also be accompanied with various locative prepositions, so the locative constructions show considerable flexibility in both variants. Using *wrap* as an example, consider (2.170).

- (2.170)        a. My mother wrapped colourful paper around the gift.  
                   b. My mother wrapped the gift in colourful paper.  
                   c. My mother wrapped the gift with colourful paper.

In (2.170), *wrap* is embedded in three different variants in the FOCs, thus yielding three different interpretations for one scene. In (2.170a), while *colourful paper* is more focused, the wrapping scene is likely to be expressed. On the other hand, when the focus shifts to *the gift* in (2.170b) and (2.170c), the scene can be construed as either covering the gift with colourful paper, or putting the gift into the colourful paper, respectively (Iwata, 2008, pp. 101-102).

### 2.5.3 English locative verbs

Previous work using semantic mechanisms to classify locative verbs has been carried out by Levin (1993) and Pinker (2013). Pinker's work included more than 140 locative verbs that were classified into two main classes: the content-oriented verbs (*into/onto* verbs), and the container-oriented verbs (*with* verbs). Each form is then divided into alternating and nonalternating verb subclasses. In a similar approach, Levin (1993) categorised more than 200 locative verbs into three classes: alternating verbs, figure verbs, and ground verbs. Apparently, Pinker's account gives more detailed verb classification in which alternating verbs are put in groups accompanied with their manners and semantic descriptions. For instance, *splatter* and *stuff* belong to different alternating groups. However, *splatter* is generally construed as a mass used with force and caused ballistic motion, and *stuff* has semantics involving a mass to be forced into a container against the limits of its capacity (Pinker, 2013, pp. 147-149). Following these approaches, it can be implied that the semantics can predict the syntax and vice versa since there is close association between verb meaning and syntactic patterns (Bowerman, 1982), which is known as "semantic clustering" (Yi and Koenig, 2016).

Broadly speaking, Pinker's and Levin's lists almost lap over each other, except few differences. For example, following Pinker's approach, alternating verbs are divided into figure alternating verbs (*spray, load, sow*) and alternating ground verbs (*paint, wrap, stuff*), whilst these two types of verbs are merged into one in Levin's classification. Besides this, *drizzle* or *carry* are nonalternating verbs in Pinker's but alternating verbs in Levin's. Considering Iwata's (2008) discussion, I agree that *drizzle* should be an alternating verb. In the following sections, the locative verbs in this study are represented grounded on verb classes proposed by Levin (1993, pp. 50-55).

### 2.5.3.1 Alternating verbs

Alternating verbs are divided into six classes, as exemplified in (2.171) to (2.176)<sup>25</sup>.

a. *Spread-type* verbs: *brush, dab, daub, plaster, rub, slather, smear, smudge, spread, streak*.

- (2.171)        a. He brushed honey on the chicken.  
                  b. He brushed the chicken with honey.

b. *Heap-type* verbs: *heap, pile, stack*.

- (2.172)        a. John stacked goods on the shelves.  
                  b. John stacked the shelves with goods.

c. *Spray-type* verbs: *inject, spatter, splash, splatter, spray, sprinkle, squirt*.

- (2.173)        a. The kids splattered mud on the floor.  
                  b. The kids splattered the floor with mud.

d. *Scatter-type* verbs: *bestrew, scatter, sow, strew*.

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<sup>25</sup> Beavers (2010, p.828) asserts that there is another alternating class (e.g., *cut, chip, scratch, slice*) whose semantics encodes damage due to contact: *Peter cut the diamond on the glass* vs. *Peter cut the glass with the diamond*. For this verb class, either the figure in the FOC or the ground in the GOC could become damaged.



- (2.174)        a. She scattered pepper on the food.  
                   b. She scattered the food with pepper.

e. *Cram*-type verbs: *cram*, *crowd*, *jam*, *stuff*, *wad*.

- (2.175)        a. John stuffed clothes into his suitcase.  
                   b. John stuffed his suitcase with clothes.

f. *Load*-type verbs: *load*, *pack*, *stock*.

- (2.176)        a. The farmers loaded hay on the truck.  
                   b. She farmers loaded the truck with hay.

### 2.5.3.2 Nonalternating verbs

This verb class is divided into two subclasses: figure verbs that are only compatible with FOCs, and ground verbs that are only compatible with GOCs.

#### 2.5.3.2.1 Figure verbs

Figure verbs are categorised into seven subclasses: *pour*-type verbs, *put*-type verbs, *coil*-type verbs, *funnel*-type verbs, *drop*-type verbs, *emit*-type verbs, and *attach*-type verbs.

a. *Pour*-type verbs: *dribble*, *drip*, *pour*, *slop*, *slosh*, *spill*.

- (2.177)        a. He spilled milk on the floor.  
                   b. \*He spilled the floor with milk.

b. *Put*-type verbs: *arrange*, *hang*, *immerse*, *install*, *lay*, *lodge*, *mount*, *place*, *position*, *perch*, *put*, *set*, *situate*, *sling*, *stand*, *stash*, *stow*.

- (2.178)        a. John put some books on the table.  
                   b. \*John put the table with some books.

c. *Coil-type verbs: coil, spin, twirl, twist, whirl, wind.*

- (2.179)        a. John wound the bandage around the sore.  
                   b. \*John wound the sore with the bandage.

d. *Funnel-type verbs: bang, channel, dip, dump, funnel, hammer, ladle, pound, push, rake, ram, scoop, scrape, shake, shovel, spoon, squeeze, squish, squash, sweep, tuck, wad, wipe, wring.*

- (2.180)        a. He shovelled coal onto the truck.  
                   b. \*He shovelled the truck with coal.

e. *Drop-type verbs: drop, hoist, lift, lower, raise.*

- (2.181)        a. He dropped a glass on the floor.  
                   b. \*He dropped the floor with a glass.

f. *Emit-type verbs: emit, excrete, expectorate, expel, exude, secrete, spew, vomit.*

- (2.182)        a. He vomited food on the ground.  
                   b. \*He vomited the ground with food.

g. *Attach-type verbs: attach, fasten, glue, nail, paste, pin, staple, stick, tape.*

- (2.183)        a. He stuck a note on the wall.  
                   b. \*He stuck the wall with a note.

#### **2.5.3.2.2 Ground verbs**

Ground verbs are divided into four subclasses: *cover-type verbs*, *pollute-type verbs*, *soak-type verbs*, and *block-type verbs*.

a. *Cover-type verbs: bandage, blanket, coat, cover, encrust, deluge, douse, face, fill,*

*flood, inundate, inlay, pad, pave, plate, occupy, shroud, smother, tile.*

- (2.184)        a. \*He coated gold leaf onto the shield.  
                   b. He coated the shield with gold leaf.

b. *Pollute-type verbs: adorn, blot, burden, clutter, deck, dirty, embellish, emblazon, endow, enrich, festoon, garnish, imbue, infect, litter, ornament, pollute, replenish, season, soil, splotch, spot, stain, taint, trim.*

- (2.185)        a. \*The factory polluted chemicals into the river.  
                   b. The factory polluted the river with chemicals.

c. *Soak-type verbs: drench, impregnate, infuse, interlace, interlard, interleave, intersperse, interweave, lard, ripple, saturate, soak, stain, vein.*

- (2.186)        a. \*He interspersed jokes into his monologue.  
                   b. He interspersed his monologue with jokes.

d. *Block-type verbs: bind, block, chain, choke, clog, dam, entangle, lash, lasso, plug, rope.*

- (2.187)        a. \*The flood blocked rubbish in the drains.  
                   b. The flood blocked the drains with rubbish.

## **2.5.4 Constraints on locative alternations in English**

In pursuing this study, it is essential to understand some constraints on the LA in English. Pinker (2013) takes a lexical rule approach to the LA, which operates the semantic structure. There are two aspects of the acquisition of the locative constructions: the broad-range conflation classes and the narrow-range conflation classes. The BRRs and NRRs help explain why some locative verbs can alternate and why others cannot.

### **2.5.4.1 Broad-range rules**

According to the BRRs, for a locative verb to become a member of the alternating group, it needs to satisfy two constraints: simultaneously denoting motion of the figure in FOCs and an end state in GOCs, as exemplified in (2.188).

- (2.188)        a. John loaded cargo onto the vessel.  
                   b. John loaded the vessel with cargo.

Through the application of the BRRs, in (2.188a), *load* specifies the manner of motion of the figural noun *cargo*. In other words, *cargo* is undergoing the movement. The thematic core here can be schematised as “X moves Y into/onto Z” (X: agent; Y: Figure; Z: Ground). In contrast, the thematic core in (2.188b) should be “X causes Y to change its state by means of moving Z to Y”, where the verb *load* specifies a change of properties. In this case, the vessel is undergoing the change of state resulting from the motion. These rules help explain why the verb *pour* in (2.189) (which implies motion only) is merely licit in FOCs, and the verb *fill* in (2.190) (which implies an end state only) is only compatible with GOCs.

- (2.189)        a. Mary poured water into the glass.  
                   b. \*Mary poured the glass with water.

- (2.190)        a. \*She filled water into the bucket.  
                   b. She filled the bucket with water.

#### 2.5.4.2 Narrow-range rules

It has been described in the previous section that if one locative verb wants to be a candidate in the LA, it must belong to a broad conflation class, denoting a manner of motion and a change or end state. Pinker (2013), however, adds that this theory is insufficient when explaining the syntactic behaviour of some verbs which cannot undergo the LA even though they fulfil both requirements of the BRRs, as exemplified in (2.191); however, the situation is different in (2.192).

- (2.191)        a. I dripped water onto the floor.  
                   b. \*I dripped the floor with water.

- (2.192)        a. I sprinkled some chocolate onto the cake.  
                   b. I sprinkled the cake with some chocolate.

We can see that the verb *drip* is used in (2.191a), but is weeded out in (2.191b). Yet, *sprinkle* has more syntactic flexibility than *drip*, that is to say, it is acceptable in both structures. Pinker puts a question that why (2.191b) does not generate an end state like (2.192b) in a way that the floor is covered with drops of water. He suggests that there are also “finer-grained criteria”, which distinguish the various syntactic subclasses of locative verbs. He thus proposes 15 locative verb subclasses, six of which are alternating (Pinker, pp. 147-149), as described in Table 2.13. The narrow constraints specifically consist of both alternating verb classes (e.g., the *smear* and *spray* subclasses) and nonalternating ones (e.g., *push* and *pour* subclasses). Learners therefore need to grasp these semantic rules so that they can be successful in acquiring transposition of the locative constructions.

**Table 2.13**

*Narrow Sets of Locative Verbs*

Subclass	Descriptions	Sample verbs
The content-oriented verbs		
<i>Spread-type verbs</i>	Simultaneous forceful contact and motion of a mass against a surface.	<i>Brush, smear, spread</i>
<i>Heap-type verbs</i>	Vertical arrangement on a horizontal surface.	<i>Heap, pile, stack.</i>
<i>Spray-type verbs</i>	Force is imparted to a mass, causing ballistic motion.	<i>splatter, spray, sprinkle</i>
<i>Scatter-type verbs</i>	Mass is caused to move in a widespread or nondirected distribution.	<i>scatter, sow, strew</i>
<i>Pour-type verbs</i>	A mass is enabled to move via the force of gravity.	<i>drip, pour, spill</i>
<i>Coil-type verbs</i>	Flexible object extended in one dimension is put around another object.	<i>coil, spin, twist</i>
<i>Emit-type verbs</i>	Mass is expelled from inside an entity.	<i>emit, expel, exude</i>

Subclass	Descriptions	Sample verbs
<i>Attach-type verbs</i>	The existence of an intermediate instrument object or substance holding objects together.	<i>attach, fasten, glue</i>
The container-oriented verbs		
<i>Cram-type verbs</i>	A mass is forced into a container against the limits of its capacity.	<i>cram, jam, stuff</i>
<i>Load-type verbs</i>	A mass of a size, shape, or type defined by the intended use of a container is put into the container.	<i>load, pack, stock</i>
<i>Cover-type verbs</i>	A layer completely covers a surface.	<i>flood, coat, cover</i>
<i>Pollute-type verbs</i>	Addition of an object or mass to a location causes an esthetic or qualitative.	<i>adorn, pollute, stain</i>
<i>Soak-type verbs</i>	A mass is caused to be coextensive with a solid or layer-like medium.	<i>ripple, soak, stain</i>
<i>Block-type verbs</i>	An object or mass impedes the free movement of, from, or through the object in which it is put.	<i>block, clog, entangle</i>
<i>Spot-type verbs</i>	A set of objects is distributed over a surface.	<i>splotch, spot, stud</i>

#### 2.5.4.3 Lexical-constructional approach

The lexical rules by Pinker (2013) provide the necessary conditions for a locative verb to alternate. However, Iwata (2008) points out that it is not easy to attest syntactic derivations in his lexical rule account, assuming that one variant is derived from the other. Another influential theory is Goldberg's (1995, p. 179) construction grammar approach which argues that the LA can be accounted for by understanding "a single verb meaning to be able to fuse with two distinct constructions, the caused-motion construction and a causative-construction plus *with*-adjunct". Goldberg's constructional account can be seen to avoid a process of derivation, but it is still problematic. That is, the interaction between verbs and constructions can be only found by reference to participant roles alone (Iwata, 2008, p. 209). Predicated upon these grounds, Iwata advances Goldberg's (1995) construction grammar approach by taking a radically usage-based view, named a lexical-constructional approach.



contribution of participant NPs and PPs in the GOCs. For example, in a case of *spread*, both Pinker's and Goldberg's approaches fail to explain the ill-formedness of (2.197b) below. Central to Iwata's idea is the attention to the role played by NPs and PPs which can decide the possibility of alternations. In order to account for an alternation of a verb, it is essential to put that verb in the full expression which is composed from its component parts. Strictly speaking, it is not easy to distinguish an alternating verb like *spray* from a nonalternating verb like *pour* without this consideration.

- (2.196)      a. He spread butter on the bread.                      (Iwata, 2008, p. 42)  
                  b. He spread the bread with butter.
- (2.197)      a. He spread the coat over the bed.                      (Iwata, 2008, p. 43)  
                  b. \*He spread the bed with the coat.

By means of the semantic analysis, unlike some verbs like *spray* and *load*, *spread* does not have an inherent sense to add a substance to something. Rather, *spread* is similar to *cover* in a way that a surface (e.g., bread) becomes progressively covered with a semi-liquid (e.g., butter) by the activity of spreading, as in (2.196b). However, the image-schema of *spread* has a varying representation in (2.197b), where the figure *coat* does not need to contact directly with the ground *bed* in the spreading action. Thus, (2.197b) cannot be considered as a covering event, and should be ruled out. Iwata then concludes that verbs by themselves cannot be claimed for alternation phenomena.

### 2.5.5 Vietnamese locative verbs and coverbs

To begin with the LA in Vietnamese, it is necessary to have a look at the locatives in Vietnamese. Consider (2.198).

- (2.198)    a. *Chị-ấy    đặt    cái    cốc    lên    (trên)    bàn.*  
                  she            put    CLA    cup    ascend    RN<sup>26</sup>    table

<sup>26</sup> RN (relator noun) occurs in locative or time phrases which follow verbs or prepositions and preceding nouns. Some locative relator nouns are *trong* 'inside', *ngoài* 'outside', *trên* 'above, top', *dưới* 'beneath, bottom', *trước* 'before, front', *sau* 'after, behind', *giữa* 'between, the middle', *quanh* 'surrounding', and *ngang* 'across' (Clark, 1978, p. 35).



- b. *Chị-ấy đặt cái cốc ở (trên) bàn.*  
 she put CLA cup be.at RN table  
 ‘She put the cup on the table.’

The example (2.198) illustrates an alternation of *đặt* ‘put’ in Vietnamese. These two patterns are called serial verb constructions which include two verbs and their respective arguments. Along these lines, *lên* ‘ascend’ in (2.198a) and *ở* ‘be at’ in (2.198b) are considered as a dynamic verb and a stative verb, respectively (Hanske, 2013). Hanske argues that *lên* and *ở* are called verbs because they can be used as single verbs in a clause. In (2.198a), the theme’s path and its topological relation are expressed by the second verb *lên* ‘ascend’ and an RN *trên* ‘top’. In (2.198b), *ở* ‘be at’ refers to a stationary location of the theme. In both constructions, the use of dynamic or stative verb does not affect semantic difference in terms of spatial topological relations, and the RNs are optional. In respect to the approach whether a verb can alternate in these patterns or not, there are two sets of verbs, as (i) and (ii) (Hanske, 2013, pp. 188-189).

- (i) Alternating verbs: *buộc* ‘tie’, *dán* ‘stick, adhere’, *dựa* ‘lean’, *đặt* ‘put’, *để* ‘put’, *treo* ‘hang’.

- (2.199) a. *Nga đã treo bức tranh lên (trên) tường.*  
 Nga PST hang CLA picture ascend RN wall  
 ‘Nga hung the picture on the wall.’  
 b. *Nga đã treo bức tranh ở (trên) tường.*  
 Nga PST hang CLA picture be.at RN wall  
 ‘Nga hung the picture on the wall.’

- (ii) Nonalternating verbs (only compatible with dynamic verbs): *cắm* ‘pierce’, *đánh* ‘hit’, *giơ* ‘raise, lift’, *hất* ‘throw’, *lăn* ‘roll’, *ném* ‘throw’, *nhấc* ‘lift’, *tung* ‘throw’, *vứt* ‘cast off, throw away’, *xiên* ‘pierce’, *xuyên* ‘go through’.

- (2.200) a. *Thanh đã ném quyển sách lên bàn.*  
 Thanh PST throw CLA book ascend table  
 ‘Thanh threw the book onto the table.’

- b. \**Thanh đã ném quyển sách ở bàn.*  
 Thanh PST throw CLA book be.at table  
 ‘Thanh threw the book on the table.’

The verb *ném* ‘throw’ does not alternate with the stative verb *ở* ‘be at’ in (2.200b). However, (2.200b) can be acceptable if it is interpreted in a different way, as *Thanh threw the book which was on the table*. By the same token, the phrase *on the table* is a modifier for *the book*.

Vietnamese grammar also has a list of coverbs which appear in a prepositional function. These types of words can be featured as either verbs or prepositions (or both), as presented in Table 2.14.

**Table 2.14**

*Vietnamese Coverbs*

Vietnamese coverbs	Meaning
ở	be in/ at, reside in
qua/ sang	go across (to), pass over/by
lại	come (back)
về	return (to)
ra	go out (to)
vô/ vào	go in/into
lên	go up (to)
xuống	go down (to)
đến/ tới	arrive at

**Note.** Reproduced from *Coverbs and case in Vietnamese* (p. 93), by M. Clark, 1978, Linguistic Circle of Canberra. Copyright 1978 by Linguistic Circle of Canberra.

It is thus that there has been some disagreement over the syntactic roles of these words, such that they are considered as either verbs or coverbs. It predicates that even though they play the role of a single verb in another context, they are prepositions in cases like in (2.198) to (2.200). Consider another illustration, in (2.201).

- (2.201) a. *Thanh đã ở đây ba năm rồi.*  
 Thanh PST live here three year already  
 ‘Thanh has been living here for three years.’

In (2.201), *ở* ‘live’ is obviously a verb. This is quite similar to the fact that many English words have functions of different syntactic roles when they are in different syntactic positions; however, in a specific position, they are attached to a fixed role. For instance, the word *fast* plays both syntactic roles of either an adjective or an adverb as in *this is a fast vehicle* or *this vehicle runs very fast*. In line with this, *lên trên* and *ở trên* from (2.198) to (2.200) are considered as prepositions, and can be translated into *onto* or *on*, respectively.

In English, the locative constructions are attached to the prepositional phrases in both variants. For most verb subclasses, these are the direction case relation such as *on(to)*, *in(to)* and *down(to)*. Following L. D. Nguyen (1975), these prepositional phrases do not raise any learnability problem for the learners. However, in Vietnamese, besides their normal geographical directions, the directional prepositions also convey a psychological rather than geographical connotation (e.g., *go down to kitchen*, *up to the living room*, *out to the sea*) (p. 27). The preposition *xuống* ‘down’ is psychologically used to show the direction in (2.202).

- (2.202) *Lan đi xuống bếp.*  
 Lan go down kitchen  
 ‘Lan went to the kitchen.’

In this case, it is not necessary to think that the kitchen is in lower level or ground than the location where Lan is standing. Following the Vietnamese housing design, the kitchen is normally located at the back of the common area, and this preposition could be used to show this downward direction. Also, the locative construction in Vietnamese can occur without a locative preposition, as in (2.203) (Clark, 1978, p. 22).

- (2.203) *John đi Nha Trang rồi.*  
 John go Nha Trang already  
 ‘John went to Nha Trang already.’

Clark (1977, pp. 23-34) states that Vietnamese verb classes are believed to have their correspondences in all languages. The ditransitive locative verbs fell into two main subclasses: *carry-type* verbs and *put-type* verbs.

a. *Carry-type* verbs: For these verbs, the agent is the instrument of locomotion, moving the patient through physical or abstract space. This verb subclass includes the following verbs: *cầm* ‘hold/carry’, *chở* ‘transport’, *dời* ‘transfer/move’, *dọn* ‘move/arrange’, *lôi, kéo* ‘pull/drag/draw’, *lôi, cuốn* ‘pull along/carry’, *lái* ‘drive/steer’, *chèo* ‘oar/row’. Consider (2.204).

(2.204)      Tôi   dọn   thức-ăn   lên   bàn-thờ.  
                  I   arrange   food   on   altar  
                  ‘I arranged food on the altar.’

b. *Put-type* verbs: These verbs have an agent that is the instrument of placing, and a patient that is being located by a relatively stationary agent. Within this class has three verb subclasses: *put-type* verbs, *put-in-type* verbs, and *put-on-type* verbs.

(i) General *put-type* verbs: *để* ‘put/place’, *đặt* ‘place/put’, *bỏ* ‘put/throw away’, *vứt* ‘discard’, *ấn* ‘press/thrust’, *giúi* ‘push/thrust’, *góp* ‘contribute/participate/collect’, *đổ* ‘pour/spill’, *tát* ‘bail/scoop’.

(2.205)      Lan   tát   nước   từ   hồ   bằng   cái   xô.  
                  Lan   scoop   water   from   pond   with   CLA   bucket  
                  ‘Lan scooped water from a pond with a bucket.’

(2.206)      Lan   đặt   quyển   sách   trên   bàn.  
                  Lan   place   CLA   book   on   table  
                  ‘Lan placed the book on the table.’

(ii) *Put-in-type* verbs: We have seen in previous examples some distributions of English-Vietnamese locatives in terms of *carry-type* verbs and general *put-type* verbs. We will now indicate further manifestations of other *put-type* verbs. This group includes such verbs as *đút* ‘insert’, *xen* ‘insert’, *nhét* ‘push in/cram’, *thọc* ‘thrust/poke’, *đăng* ‘publish’, *nhúng* ‘dip/immerse’, *kể* ‘mention/count’, *đâm* ‘stab/prick’, and *đóng*

‘drive in/fix’. These verbs normally go with prepositions *vào* ‘into’ or with the locative RN *trong* ‘inside’.

- (2.207) *Họ thêm một từ vào trong câu.*  
 they insert one word into in sentence  
 ‘They inserted one word into the sentence.’

- (2.208) *Lan dứt tay vào túi áo.*  
 Lan thrust hand into pocket coat  
 ‘Lan thrust her hand into her pocket.’

(iii) *Put-on* type verbs: Members of this group usually go with prepositions *trên* ‘on’ or *lên trên* ‘onto’, as in (2.209) and (2.210). This group includes verbs such as *vẽ* ‘draw/paint’, *chép* ‘write/ note’, *treo* ‘hang’, *dán* ‘glue/stick’, *gắn* ‘join/pin’, *áp* ‘press against/approach’, *thoa* ‘rub/anoint’, *bôi* ‘smear’, *chiếu* ‘shine/project’.

- (2.209) *Anh-ấy bôi dầu lên/ lên-trên máy.*  
 he smear oil on/onto machinery  
 ‘He smeared oil on the machinery.’

- (2.210) *Lan treo áo-choàng lên/ lên-trên tường.*  
 Lan hang coat on/onto wall  
 ‘Lan hung the coat on the wall.’

There is one more group called ‘verbs of taking’ whose syntax normally goes with the preposition *từ* ‘from’ (H. D. Nguyen, 1976, p. 932). This group includes members such as *ăn bớt* ‘squeeze’, *ăn cướp* ‘rob’, *ăn cắp* ‘steal’, *ăn quịt* ‘eat without paying’, *bòn* ‘extort’, *chiếm đoạt* ‘seize’, *lấy* ‘steal/take’, *giật* ‘snatch’, *nợ* ‘owe’, *nhận* ‘receive’, *thu* ‘collect’, and *thuê* ‘rent’. This verb subclass is roughly equivalent to the steal-verbs in English described by Levin (1993, p. 52).

- (2.211) *Tên trộm trộm bức tranh từ bảo-tàng.*  
 CLA thief steal CLA picture from museum  
 ‘The thief stole the picture from the museum.’

### 2.5.6 Vietnamese locative structures

As noted, the similarities or differences of locative alternations between two languages are expected to contribute to the ease or difficulty with which the target features are acquired. In this section, three types of English locative verbs and their counterparts in Vietnamese are scrutinised so as to identify whether there are any cross-linguistic differences with regard to the semantics or syntax.

In terms of alternating verbs in English, I shall first have a look at some Vietnamese verbs whose counterparts alternate in English, such as *phết*, *trải* ‘spread’, *đóng gói* ‘pack’, and *bọc* ‘wrap’, as illustrated from (2.212) to (2.214).

- (2.212) a. *Lan đã phết bơ lên/ lên-trên bánh mì.*  
 Lan PST spread butter on/onto cake bread  
 ‘Lan spread butter on the bread.’
- b. *Lan đã phết bánh-mì với bơ.*  
 Lan PST spread bread with butter  
 ‘Lan spread the bread with butter.’
- (2.213) a. *Lan đã đóng-gói quần áo vào vali.*  
 Lan PST pack trousers shirts into suitcase  
 ‘Lan packed clothes into the suitcase.’
- b. *Lan đã đóng-gói vali với quần áo.*  
 Lan PST pack suitcase with trousers shirts  
 ‘Lan packed the suitcase with clothes.’
- (2.214) a. *Lan đã bọc giấy màu quanh món quà.*  
 Lan PST wrap paper colour around CLA present  
 ‘Lan wrapped the colour paper around the present.’
- b. *Lan đã bọc món quà bằng giấy màu.*  
 Lan PST wrap CLA paper with paper colour  
 ‘Lan wrapped the present with the colour paper.’

As can be seen from (2.212) to (2.214), *spread*, *pack*, and *wrap* yield their parallel

patterns in L1. However, semantically, FOCs' meanings seem to be more natural meaning than those of GOCs in L1. I have made some search queries with Google and the results have confirmed this. That is, the five-token search query like *đóng gói quần áo vào* 'pack clothes into' has 2490 occurrences, whereas *đóng gói vali với* 'pack the suitcase with' has 581 occurrences. Although I could not filter the outcome with repetitions and irrelevant syntax (e.g., *đóng gói vali với bạn của tôi* 'pack the suitcase with my friends') via this approach, obviously, this overall representation has confirmed that FOCs are more frequently used than GOCs regarding some verbs like *spread*, *pack*, and *wrap*. In the same manner, this semantic and syntactic approach is applied to other related-semantic verbs (e.g., *phết* 'plaster', *bôi* 'smear', *quét* 'brush').

Let us now move to other verbs. Consider the cases of *phun* 'spray', *chất* 'load', or *treo* 'hang', as in (2.215) to (2.216).

- (2.215) *Thanh đã phun sơn lên/ lên-trên cửa.*  
 Thanh PST spray paint on/onto door  
 'Thanh sprayed paint on the door.'  
 'Thanh sprayed the door with paint.'

- (2.216) *Linh đã chất hàng lên/ lên-trên con tàu.*  
 Linh PST load cargo on/onto CLA vessel  
 'Linh loaded cargo onto the vessel.'  
 'Linh loaded the vessel with cargo.'

As can be seen in (2.215) and (2.216), we can experience a different picture of the syntactic realisation between the two languages. While *spray* and *load* can undergo the LA, their correspondences only occur in the Vietnamese FOCs. This cross-syntactic incongruence is implemented for other analogous verbs in *spray*-type verbs (e.g., *bắn tung tóe* 'spatter', *rải* 'sprinkle') and *load*-type verbs (e.g., *chất* 'load', *đóng gói* 'pack', *cung cấp* 'stock'). I shall now move to some other verbs like *trồng* 'plant' and *treo* 'hang', as illustrated in (2.217) and (2.218).

- (2.217) a. *Cô-ấy đã trồng nhiều hoa trong vườn.*  
 she PST plant many flower in garden  
 'She planted many flowers in the garden.'

- b. *Cô-ấy đã trồng trong vườn nhiều hoa.*  
 she PST plant in garden many flower  
 ‘She planted the garden with many flowers.’

- (2.218) a. *Nga đã treo những bức ảnh lên tường.*  
 Nga PST hang some CLA picture on wall  
 ‘Nga hung the pictures on the wall.’

- b. *Nga đã treo lên tường những bức ảnh.*  
 Nga PST hang on wall some CLA picture  
 ‘Nga hung the wall with the pictures.’

Examples (2.217) and (2.218) show that *trồng* ‘plant’ and *treo* ‘hang’ can alternate in two variants. Yet, it is realised that the Vietnamese GOCs are licensed by prepositions *trong* ‘in’, and *trên* ‘on’, respectively. In another way, Vietnamese GOCs with these verbs can only happen with the help of the prepositions *trong* ‘in’, and *trên* ‘on’, correspondingly.

Let me now have a look at some sets of nonalternating verbs. As to English figure verbs, consider examples with *sắp xếp* ‘arrange’, *nhấc* ‘lift’, *đổ* ‘pour’, and *làm tràn* ‘spill’, as in (2.219) to (2.222).

- (2.219) *Hòa đã sắp-xếp đồ-đạc trong phòng khách.*  
 Hoa PST arrange furniture in room guest  
 ‘Hoa arranged the furniture in the living room.’

- (2.220) *Thanh đã nhấc cái ghế trong phòng ngủ.*  
 Thanh PST lift CLA chair in room sleep.  
 ‘Thanh lifted the chair in the bedroom.’

- (2.221) *Nga đã đổ nước vào/vào-trong chai.*  
 Nga PST pour water in/into bottle  
 ‘Nga poured water into the bottle.’



- (2.222) *Phong đã làm-tràn sữa lên/lên-trên sàn.*  
 Phong PST spill milk on/onto floor  
 ‘Phong spilled milk on the floor.’

As can be seen from (2.219) to (2.222), English figure verbs (i.e., *arrange*, *lift*, *pour*, *spill*) do have their equivalent verbs in Vietnamese. Other verbs or *pour*-type class (e.g., *nhỏ giọt* ‘drip’, *đổ* ‘pour’) or *put*-verb class (*đặt* ‘put’, *để* ‘lay’) can experience a similar approach. In both examples, the Vietnamese locative has its counterpart in English. Nevertheless, the cross-linguistic congruence of this verb type does not always happen. Consider (2.223) for the illustration of *cài đặt* ‘install’.

- (2.223) a. *Chinh đã cài-đặt máy-in vào máy-tính.*  
 Chinh PST install printer on computer  
 ‘Chinh installed a printer on the computer.’
- b. *Chinh đã cài-đặt máy-tính với máy-in.*  
 Chinh PST install computer with printer  
 ‘\*Chinh installed the computer with a printer.’

Semantically, although (2.223a) seems to be more natural than (2.223b), Vietnamese speakers still use (2.223b) with a similar meaning. In this case, the use of *install* in L1 could cause some troubles for EFL learners. To sum up, figure verbs (excluding *install*) are supposed not to raise any learnability problem for the VLEs.

I now move to how English ground verbs are expressed in Vietnamese. Let us have a first look at verbs like *đổ đầy* ‘fill’, *trang trí* ‘decorate’, *cover* ‘phủ’, and *surround* ‘bao quanh’. Consider (2.224) to (2.228).

- (2.224) a. *Anh-ấy đã phủ bạt lên ô-tô.*  
 he PST cover canvas onto car  
 ‘\*He covered a canvas onto the car.’
- b. *Anh-ấy đã phủ ô-tô với bạt.*  
 he PST cover car with canvas  
 ‘He covered the car with a canvas.’

- (2.225) a. *Chinh đã trang-trí nhiều ngôi sao lên/lên trên trần-nhà.*  
 Chinh PST decorate many CLA star on/onto ceiling  
 ‘\*Chinh decorated many stars onto the ceiling.’
- b. *Chinh đã trang-trí trần-nhà với nhiều ngôi sao.*  
 Chinh PST decorate ceiling with many CLA star  
 ‘Chinh decorated the ceiling with many stars.’
- (2.226) a. *Thanh đã đổ đầy nước nóng vào-trong chai.*  
 Thanh PST pour full water hot into bottle  
 ‘(lit.)<sup>27</sup> \*Thanh filled hot water into the bottle.’
- b. *Thanh đã đổ đầy chai với nước nóng.*  
 Thanh PST pour full bottle with water hot  
 ‘Thanh filled the bottle with hot water.’
- (2.227) a. *Chị ấy đã ngâm xà-phòng với áo.*  
 she that PST soak soap with shirt  
 ‘(lit.) \*She soaked soap with the shirt.’
- b. *Chị ấy đã ngâm áo với xà-phòng.*  
 She that PST soak shirt with soap  
 ‘She soaked the shirt with soap.’
- (2.228) a. *Anh ấy đã bao hàng-rào xung-quanh khu vườn.*  
 he that PST surround fence around CLA garden  
 ‘\*He surrounded fences around the garden.’
- b. *Anh ấy đã bao-quanh khu vườn bằng hàng-rào.*  
 he that PST surround CLA garden with fence  
 ‘He surrounded the garden with fences.’

<sup>27</sup> This means literally. It implies that the translation is not natural English.

As can be seen from (2.224) to (2.228), verbs like *cover*, *decorate*, *fill*, *soak*, and *surround* are alternating verbs in Vietnamese as they can syntactically appear in two locative variants. This is contrary to their English counterparts which are only licit in GOCs. This cross-linguistic difference of *these verbs* in the syntax may pose some learnability obstacles (i.e., negative transfer) for the learners. Let us have a look at other ground verbs, such as *làm ngập* ‘flood’ and *làm ô nhiễm* ‘pollute/ contaminate’, in (2.229) and (2.230).

(2.229) Anh ấy đã làm-ngập khu vườn với rác-thải.  
 he that PST flood CLA garden with rubbish  
 ‘He flooded the garden with rubbish.’

(2.230) Họ đã làm ô-nhiễm con sông với rác-thải.  
 they PST make polluted CLA river with rubbish  
 ‘They polluted/contaminated the river with rubbish.’

In (2.229) and (2.230), Vietnamese GOCs are claimed to have an underlying structure similar to English GOCs regarding *flood*, *pollute*, and *contaminate*. Additionally, in relation to ground verbs *làm ngập* ‘flood’, active sentences with inanimate agents, or passive forms are favoured. Consider (2.231) and (2.232).

(2.231) Trận mưa lớn làm-ngập-lụt thành-phố.  
 CLA rain big flood city  
 ‘The heavy rain flooded the city.’

(2.232) Thành-phố bị ngập bởi trận mưa lớn.  
 city suffer flood by CLA rain big  
 ‘The city was flooded by the heavy rain.’

I have hitherto discussed several Vietnamese LAs whose syntax-semantics mapping reflects the incongruence across three verb types in English. That is to say, the two languages differ in terms of narrow-range constraints. Some English alternators (*brush*, *pack*, *spread*, or *wrap*) do have their counterparts in Vietnamese, whilst others (*hang*, *load*, *plant*, *spray*) are figure verbs in Vietnamese. On top of that,

English figure verbs (*install*) and English ground verbs (*cover, decorate, fill, soak, surround*) are alternators in Vietnamese. Thus, the mismatched locative NRR constraint can impose a negative problem to learners' acquisition of locative structures as they need to figure out which verbs are associated with their narrow-range conflation classes in English. Taking everything into account, Vietnamese is more productive in figure verbs since all English verbs which occur in FOCs are very likely to have their counterparts in Vietnamese, but the opposite tendency for Vietnamese verbs is not true (e.g., *phủ* 'cover', *trang trí* 'decorate', *đổ đầy* 'fill', *ngâm* 'soak', *bao quanh* 'surround').

### 2.5.7 Previous SLA approaches to locative structures

Over the past three decades, a number of studies on L2 locative structures have received attention in SLA. The most focused areas amongst these studies were about the learnability of the L2 learners when acquiring NRRs and holism effect (Bley-Vroman & Joo, 2001; Choi & Lakshmanan, 2002; Joo, 2003; Lee, 2009; Rezai & Avand, 2011), language transfer (Juffs, 1996b; Yakhabi et al., 2018), and locative verb classes (Alotaibi, 2016; Bullock, 2004; Park 2016). In this section, I shall go through some relevant key studies.

#### 2.5.7.1 Research on language transfer

Juffs (1996b) investigated Chinese learners' knowledge of syntax and semantics on three types of locative verbs: alternating verbs (i.e., *load, pack, paint, splash, spray*), ground verbs (*block, cover, decorate, stain, touch*), and figure verbs (*nail, pour, spill, throw, vomit*). The researcher recruited five groups of ESL Chinese students who were at four different levels of English. Groups 1 and 2 were first-year students (mean age: 18.75), group 3 included second-year students (mean age: 19.5), group 4 involved fourth-year students (mean age: 20.6), and the last group consisted of postgraduate students in English and young English teachers (mean age: 25). All participants were administered sections of grammar and vocabulary in a Michigan test. There was also a control group of 22 monolingual Chinese subjects (They had little knowledge of English) who completed a Chinese version of the GJT. The final group was a control one with 19 monolingual English native speakers from a Canadian university (mean age: 21.5). They completed the same task as the L2 learners. All the Chinese

participants had to do a verb-meaning test, in which they matched a picture with the best verb. A production task and a GJT were administered to all participants. With respect to the GJT, they were required to judge each item on a seven-point Likert scale (from -3 “completely impossible” to +3 “completely possible”). In the production task, participants were given a picture with some cues such as nouns and a verb. They were then required to make up three sentences for each picture out of these cues. Two versions of the task had a total of 12 pictures.

The results indicated that although Chinese learners and native controls had similar performance on the alternating class in the elicited production task, the learners displayed a tendency to favour FOCs. With respect to the ground verbs, the low-level and intermediate learners were different from the NSs regarding the ground verbs in the production task. This is because the Chinese grammar of the ground verbs is wider than English, leading to the fact that learners will treat ground verbs like alternating verbs (e.g., *John covered the blanket onto the bed*). In the meantime, despite the fact that the advanced learners went through the transfer stage as they had native-like performance for the GOCs in the elicited production task, their acceptability judgments to the GJT were significantly different from the NSs. The production data were consistent with the hypothesis that L1 transfer of parameter-settings was found. Table 2.15 presents mean judgments of participants in the GJT (adapted from Juffs, 1996b, p. 202).

**Table 2.15**

*Mean Judgments on Locative Verbs in the GJT*

Locative verbs	Locative structures	Groups of Participants				
		Low	Inter.	High	Adv.	Native
Alternating verbs	FOCs	1.632	1.960	1.920	2.393	2.484
	GOCs	1.908	2.022	2.220	1.890	2.737
Figure verbs	FOCs	2.059	2.159	2.330	2.783	2.789
	GOCs	-1.579	-1.707	-1.390	-1.783	-2.539
Ground verbs	FOCs	-0.246	-0.367	-0.016	-0.354	-1.768
	GOCs	2.246	2.388	2.766	2.880	2.947

In another study, Bullock (2004) examined the acquisition of locative verbs by Korean learners of English with their TOEFL scores ranging from 600 to 650. The test verbs consisted of four types: alternating figure verbs (*spray, sprinkle, squirt*), alternating ground verbs (*cram, load, pack*), nonalternating figure verbs (*glue, pour, spill*), and nonalternating ground verbs (*cover, fill, pour*), all of which were tested in two different patterns<sup>28</sup>: locative alternation and PP-omission, as in (2.233) to (2.234), respectively.

- (2.233)      a. Ethan sprinkled the cake with sugar.  
                 b. Ethan sprinkled sugar onto the cake.

- (2.234)      a. Ethan sprinkled the sugar.  
                 b. Ethan sprinkled the cake.

One verb appeared in two structures, with a total of 48 items which were all tested by means of a GJT. Two groups (five participants each) were involved in the study: one experimental group (TOEFL scores ranged from 600 to 650) and one control group.

The findings proved that the Korean learners had nearly native-like competence of locative structures, and that they made distinctions between alternating and nonalternating verbs, as summarised in Table 2.16. It was concluded that the Korean learners had nearly native-like knowledge of English LA, and they could distinguish between alternating and nonalternating locative verbs. Bullock argued that the learners' high correct ratings could be stemmed from verb-by-verb learning, and they initially made correct hypotheses for the English LA. When it comes to the findings of the PP-omission task, both groups basically distinguished the PP-omission items across verb classes. However, these results were not as clear as those of the first task. The researcher argued that the stimulus sentences could be understood in other ways without the contexts, or they were rejected because they appeared incomplete.

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<sup>28</sup> Bullock (2004) had originally included the third pattern, namely raising-to-subject (*the sugar sprinkled onto the cake in a few minutes* vs. *the cake sprinkled with sugar in a few minutes*). However, the data of this task were excluded due to mixed results and potential item-design problems.

**Table 2.16***Participants' Number of Acceptances of Locative Structures*

Verb class	Structure	Locative alternation	
		Korean students	Native speakers
Alternating figure verbs	FOCs	14	15
	GOCs	12	15
Alternating ground verbs	FOCs	15	15
	GOCs	14	14
Figure verbs	FOCs	14	15
	GOCs	5	0
Ground verbs	FOCs	5	3
	GOCs	15	14

*Note.* This Table is adapted from Bullock (2004, p. 61)

Other research by Alotaibi (2016) investigated the acquisition of the locative structures by 100 advanced Kuwaiti learners of English (mean age: 23). To this end, a GJT was used to examine whether the learners could make a distinction between the alternating locative verbs and nonalternating locative verbs used in the FOCs and the GOCs. The research materials consisted of two types of verbs: six alternating verbs (*load, pile, plaster, spread, squirt, stuff*), and six nonalternating verbs (*dip, dribble, fill, insert, push, put*). The outcomes showed that the participants encountered problems with not only nonalternating verbs but also alternating ones. However, their performance on the alternating verbs was better than on the nonalternating verbs because of positive transfer for alternating verbs and negative transfer for nonalternating verbs.

Recently, Yakhabi et al. (2018) investigated the acquisition of English locative constructions by Iranian EFL learners, focusing on L1 transfer and language proficiency. The participants were a total of 90 Iranian EFL learners who were equally divided into three groups (30 low-proficiency, 30 mid-proficiency, and 30 high-proficiency). The authors aimed to seek the answers of whether the proficiency level

of the Iranian EFL learners affected the acquisition of the argument structure of English locative constructions in the absence of negative evidence, and whether Iranian EFL learners' L1 (Persian) affected the acquisition of English locative constructions. To this end, two tasks were employed: a production task and a GJT. In the production task, all learners were required to write the descriptions of 48 pictures with some cues. This task involved 38 verbs which were classified into four groups: 10 alternating figure verbs (*spray, spread, brush, pile, rub, scatter, inject, plaster, splash, and plate*), eight alternating ground verbs (*load, wad, crowd, pack, cram, stock, jam, and stuff*) 10 figure verbs (*plant, drip, paste, pour, wind, spill, pin, stick, tape, and nail*), and 10 ground verbs (*face, dirty, soak, pave, chain, bandage, cover, rope, spot, and fill*). The second task involved a GJT in which 30 verbs were divided into three groups: five alternating figure verbs (*smudge, sprinkle, dab, daub, and squirt*), five alternating ground verbs (*pack, load, jam, crowd, and cram*), 10 figure verbs (*attach, dump, slop, dribble, twirl, spin, slosh, shake, ladle, and glue*), and 10 ground verbs (*soil, dam, deck, plate, flood, litter, block, coat, pad, and plug*). For this task, there were thus 40 items (30 grammatical items, and 10 ungrammatical items) which were judged on a five-point Likert scale from -2 to +2. Regarding the production task, there was not much difference in the performance on producing sentences using figure verbs and ground verbs. For the alternating verbs, the group of high-proficiency performed better than the others. Although the intermediate learners had better performance compared with the beginners, all of them still had numerous difficulties in alternating and ground verbs. The advanced learners produced the best performance amongst the three groups, which indicated that the learners' proficiency level of English had a significant effect on their acquisition of the locative structures. In respect of the obtained results from the GJT, the learners' performance was statistically different amongst the three groups. In particular, the FOCs received more correct responses than the GOCs regarding the figure verbs and alternating ground verbs due to the L1 transfer. For example, some locative verbs alternate in English but not in Persian, or *pour* is considered as a ground verb in Persian. In this regard, the researchers assumed that the licit structures seemed to be less marked than the illicit ones.

#### **2.5.7.2 Research on holism and narrow-range verb classes**

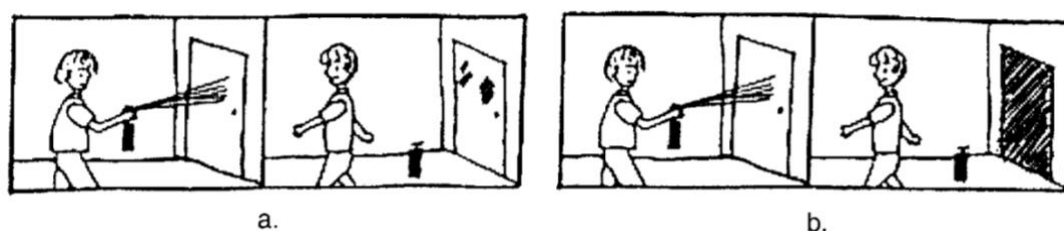
Bley-Vroman and Joo (2001) investigated Korean learners of English in terms of the NRRs and the holism effect by means of a forced-choice picture-description task. The



research materials consisted of three types of locative verbs, including four alternating verbs (*load, pack, spray, sprinkle*), four figure verbs (*pour, spill, glue, nail*), and four ground verbs (*cover, decorate, fill, pollute*). Two groups took part in the project: one group of 59 Korean learners of English and one control group of 17 NSs. The Korean participants were rated as high-level learners of English as their TOEFL score was from 550 to 650. Another group of 16 Korean subjects were administered a Korean-language version of the instrument in which they were required to indicate their preferred picture with locative sentences. In the forced-choice picture-description task, two story strips depicted one event in which one ground argument was wholly affected, and the other one was not, as in Figure 2.1 (Bley-Vroman & Joo, 2001, p. 211). Along with the pictures were two locative variants (i.e., the FOC and the GOC), and all subjects were required to choose which pictures best illustrated the semantics of the pattern. There was also one more option of ‘neither’ for ungrammatical sentences.

**Figure 2.1**

*Sample Test Item*



Both strips (a) (the figure picture, henceforth) and (b) (the ground picture, henceforth) in Figure 1 illustrate the same event, in which John is spraying the paint. The difference between them is that the door is not wholly covered with paint in the figure picture, whereas the completely painted door is in the ground picture. The experimenters argued that the NSs would have more tendency of choosing GOCs for the ground picture.

The findings in Table 2.17 revealed that both learners and native groups had semantic knowledge of the locative when choosing ground pictures for the GOCs as the holism effect has been supported by L1 language grammar. In contrast to holism, the NRRs seem not ready to be acquired due to the lack of cross-linguistic correspondences.

**Table 2.17***Mean Rate of Choice of Ground Picture*

Verb class	Structure	Korean learner (N=59)	Native speaker (N=17)
figure verb	FOCs	1.97	1.88
	GOCs	2.83	0.59
ground verb	FOCs	1.62	0.53
	GOCs	3.46	3.65
alternating verb	FOCs	1.98	1.94
	GOCs	2.98	3.35

*Note.* This Table is adapted from Bley-Vroman and Joo (2001, p. 218)

The experimenters suggested that these results were compatible with the Full Transfer/Full Access Hypothesis by Schwartz and Sprouse (1996). As to the Korean-language instrument, the outcome was not as expected. The data were not statistically analysed and could not be compared with those of English. For certain Korean verbs, a figure verb was chosen more often than the ground picture. The ground picture, however, was generally chosen for some verbs, and both choices seemed possible for some verbs. Generally, this outcome did not reflect the narrow class divisions of English and clear holism.

In a similar study using different research methodology, Joo (2003) also went over the acquisition of whether Korean learners distinguish the BRRs and NRRs. English and Korean locative verbs are different with respect to NRRs as most English ground verbs (e.g., *fill*, *cover*, and *decorate*) are alternating ones in Korean. The researcher argues that Korean learners are not instructed about the grammaticality of locative constructions in secondary English classes in Korea. Consequently, the learning condition between Korean learners and L1 children is similar in terms of a lack of negative evidence<sup>29</sup>. All the participants and materials were the same as Bley-

<sup>29</sup> The L2 is acquired by both positive and negative evidence (Dekeyser, 1993). The negative evidence is some kind of input that lets learners know what is ungrammatical or unacceptable of a form or an utterance in a language. This may include different forms ranged from feedback offered by a teacher,

Vroman and Joo's (2001) study but they were tested with a forced-choice sentence selection task in which the participants were presented one picture at a time plus two locative patterns, and they were required to choose one sentence to best describe the picture, or "neither" for ungrammatical items. The results obtained from this study reflected the holism effect. In response to the ground verbs, a majority of participants in both groups chose GOCs for the ground pictures where the ground is completely filled or covered. However, when the figure pictures were presented, different results arose from both groups. More specifically, the Korean subjects mostly selected FOCs, and the NSs chose either GOCs or "Neither". This output implies that the Korean subjects chose the ungrammatical sentences due to the L1 transfer, and the NSs did not use the ground verbs. In terms of the figure verbs that are also the figure verb in Korean, a similar percentage of ESL subjects chose FOCs and GOCs, accounting for 41% and 56%, respectively. By contrast, all the NSs chose FOCs regardless of what type of pictures was presented. Overall, the findings from both tasks showed that the Korean learners of English had acquired the BRRs for the locative construction. However, they could not acquire the NRRs because of failing to distinguish the verbs in three groups.

In the theme of holism, Choi and Lakshmanan (2002) tested spatial interpretation of locative structures. Nine adult Korean learners of English and 10 NSs of English were involved in the study. Unlike English, figure verbs are only compatible with the FOCs in Korean, and ground verbs belong to alternating class. The English materials examined in this study fell into four categories: three nonalternating figure verbs (i.e., *pour*, *spill*, and *spit*), three nonalternating ground verbs (*cover*, *fill*, and *soak*), two alternating figure verbs (*plaster* and *spray*), and two alternating ground verbs (*load* and *stuff*). The researchers employed a picture-cued sentence interpretation task of the two language versions in which all subjects were presented with a context, following three pictures and stimulus sentences. They were asked to make spatial interpretations of each picture on the basis of a 5-point scale ranging from 0 (completely mismatched) to 4 (completely matched) as in Figure 2.2 (Choi & Lakshmanan, 2002, p. 100).

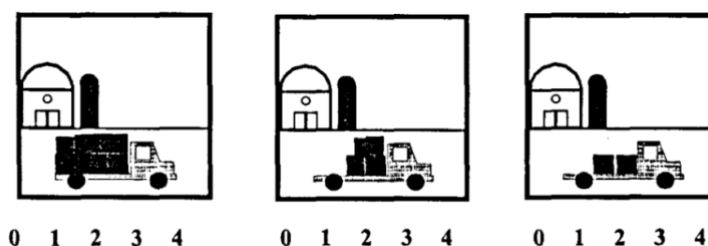
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to more casual rewording of an utterance which is offered by a native-speaking conversational partner (Mitchell & Myles, 2004). The positive evidence, on the other hand, means exposure to comprehensible input (e.g., well-formed structures) (Ellis & Robinson, 2008).

**Figure 2.2***Sample of Picture-Cued Sentence Interpretation Task*

**Context:** *Tom, John and Mary are friends. Last week, they went out of town. When they returned, they discovered that each of their roommates had done something strange while they were gone.*

**Tom's House**  
**Tom's roommate had.....**  
 I.....loaded the truck with boxes.



The data revealed that both groups strongly preferred a holistic interpretation of the nonalternating ground verb class to the nonalternating figure verb class. Regarding the alternating verb class, even though the NSs strongly preferred a holistic interpretation of GOCs, the learners rated the FOCs and the GOCs similarly. This indicates that there was no evidence for a holism effect of GOCs by Korean learners. Choi and Lakshmanan claimed that these findings could be attributed to L1 transfer.

The last study conducted by Rezai and Avand (2011) focused on BRRs, NRRs, effect of language proficiency by 60 intermediate and advanced Persian speakers. With respect to cross-linguistic distributions of locative verbs, no alternating locative verbs are found in Persian. Specifically, *load*, *pile*, and *plaster* are ground verbs, whilst *paint*, and *spray* are figure verbs. To notch up these objectives, three different research instruments were implemented, namely production task, GJT, and object holism effect task. Following the obtained results, the proficiency factor did not have a significant effect in the three tasks as there was no statistically significant difference in the performance of the two groups. Persian learners of English had more difficulties in acquiring the alternating class than the nonalternating class due to language transfer. The results also indicated that they had knowledge of the holism effect of the locative constructions but they had difficulty acquiring the semantic verb classes due to the lack of cross-linguistic correspondence.

Through reviewing the related SLA studies, it is evident that there have been controversial findings of whether language proficiency can affect the acquisition of

locative structures. On the one hand, the advanced Korean learners made distinctions between alternating and nonalternating locative verbs, and attained the native-like competence of locative structures (Bullock, 2004), but on the other hand, advanced Kuwaiti learners of English were not ready to distinguish the alternating class from figure class or ground class (Alotaibi, 2016). Besides this, language transfer (positive and negative) has been found to make contributions to the learners' acquisition of locative structures (Alotaibi, 2016; Juffs, 1996b; Rezai and Avand, 2011; Yakhabi et al., 2018). However, in Joo's (2003) research, the language transfer was not found. In terms of Pinker's (2013) learnability theory, the learners were found to gain knowledge of broad constraints (holism), and were insensitive to the language-particular narrow conflation classes which are defined by NRRs (Bley-Vroman and Joo, 2001; Choi and Lakshmana, 2002; Joo, 2003; Lee, 2009; Rezai and Avand, 2011).

### **2.5.8 Implications for addressing the research gap**

Through this review of literature, it is unquestionable that there is a much need for research into the role and impact of locative structures in SLA.

Firstly, in Choi and Lakshmanan's (2002) study, all Korean subjects were required to do a GJT of LA with two answer options (i.e., *acceptable* and *unacceptable*) as a proficiency test. However, such test has posed some problems, as Joo (2003) argues that the binary choice questions may have forced learners to guess the answers. In addition, it was quite strange to employ a GJT as a placement test, because, strictly speaking, participants' knowledge on a specific English construction cannot truly reflect their general proficiency of English. Moreover, it was thus more biased if they were assessed to have native-like judgments when passing such a test. Another methodological problem may have also arisen from the picture-cued sentence interpretation task in their study. From my perception of Figure 2.2, not many differences in spatial interpretations between pictures 2 and 3 can be recognized, and some participants could make exclusion of the middle picture. Additionally, the given contexts were redundant and exerted no effect on the participants' choice as well. Although considerable attention of previous studies has been paid to knowledge of constructional locative alternations by EFL learners (Alotaibi, 2016; Bullock, 2014; Juffs, 1996a; Rezai & Avand, 2011; Yakhabi et al., 2018), this has only restricted to a small range of verbs. In the current experiment, a wider range of 24 locative verbs belonged to three verb classes were investigated.

Secondly, one plausible shortcoming from some previous studies (e.g., Alotaibi, 2016; Yakhabi et al. 2018) is that the experimenters did not employ a Word-Meaning Matching Task to make sure that all participants were familiar with the words before doing the experimental tasks. Although the authors mentioned that the materials were selected according to word frequency, or the participants had advanced level proficiency according to the placement test (Alotaibi, 2016), this, obviously, did not guarantee that learners knew all the target verbs. In Joo's (2003) study, it may seem fine to use a forced-choice sentence selection task to investigate the holism effect of GOCs. However, this approach is likely to expose a critical shortcoming when being used to examine syntactic grammaticality. Supposing when figure pictures were presented, answers of the GOC or "Neither" could have been chosen because learners might have thought that these answers did not best describe the current pictures, not for the fact that these answers were ungrammatical. As a result, any conclusions drawn from these findings, in terms of BRRs or NRRs, may have been biased up to a point.

Lastly, the lack of attention to the acquisition of the LA by the VLEs has provided a good rationale for the present experiment. Although there exists a good body of SLA studies using EFL/ ESL learners from different languages (e.g., Chinese, Korean, Persian, and Kuwaiti), to the best of my knowledge, so far there have not been any SLA studies devoted to the acquisition of the LA by the VLEs. One more reason for the conduct of this experiment in the Vietnamese context is that Vietnamese LA and its counterparts in other languages are not the same. It is thus worth conducting the LA in Vietnamese regarding L1 transfer. For example, while Korean and English are similar in terms of broad-range constraints (Joo, 2003), Vietnamese and English are not. Kim (1999, p. 21) mentions that there are two branches of languages regarding the locative structures. The first type is that Korean-type languages (e.g., Korean, Japanese, Chinese, Thai, Turkish, Hindi, and Luganda) do not have ground verbs, and all locative verbs can be compatible with the FOC. The second type is that English-type languages (e.g., English, French, Spanish, Singapore Malay, Najdi Arabic, and Hebrew) allow ground verbs. Nevertheless, Vietnamese locative structures are quite different from these languages in many aspects. Through the review of previous studies, the cross-linguistic distinctions of locative verbs are summarised in Table 2.18.

**Table 2.18***Distinctions of Locative Structures across Different Languages*

Language	Locative alternators	FOC	GOC
Vietnamese	English figure verbs ( <i>install</i> ) and English ground verbs ( <i>cover, decorate, fill, soak, surround</i> ) are alternators in Vietnamese.	Vietnamese figure verbs are more productive. Some English alternators (e.g., <i>hang, load, plant, spray</i> ) are figure verbs in Vietnamese.	Vietnamese ground verbs are less productive
Arabic	Verbs like <i>fill, dip, insert, quirt, and stuff</i> are alternating verbs.	<i>Pile, plaster, and spread</i> are only compatible with the FOC in Arabic.	
Korean	There are only ground alternating verbs. Most change-of-state verbs like <i>fill, cover, and decorate</i> are Korean alternators.	English alternating verbs (e.g., <i>load, pile, spray</i> ) are figure verbs in Korean	There are no ground verbs
Persian	There are no alternating verbs	<i>Paint</i> and <i>spray</i> are figure verbs	<i>Load, pile, plaster, or pour</i> are ground verbs in Persian

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Overview

This chapter describes the research methodology, including the experimental design, data collection, and data analysis procedures for three experiments. It is organized as follows. In Section 3.2, I present detailed information on the research participants, together with a description of the two types of placement tests employed to qualify participants in Section 3.3. Section 3.4 then introduces the data collection instrument used in the study. The next section addresses the stimulus sentences that were employed within each of the three experiments of the study design, followed by an explanation of the research process in Section 3.6. Finally, Section 3.7 delivers the research questions as well as the hypotheses, the results of which are reported in Chapter 4.

### 3.2 Participants

For the data collection to be legitimately carried out, I had sought and successfully obtained the ethical approval for my study from the Human Research Ethics Committee of the University of Southern Queensland (USQ) (Approval Number: H19REA260). All participants were supplied with an online participant information sheet and an online consent form prior to the research, and the collected data were coded by the primary researcher only. Participants were informed that their participation was totally voluntary, and that they could withdraw their engagement at any time without penalty (See Appendix U for ethics documents).

This research recruited a total of 72 participants (age ranged from 18 to 35) divided into 2 groups: an experimental group of 36 VLEs (age mean: 21.92), and a control group of 36 native English speakers (age mean: 27.75). The gender portion in both groups was virtually similar: the experimental group had 29 females and 7 males, and the control group had 31 females and 5 males. The learners were either graduands or graduates learning English as a major. All participants were given money as incentives for their involvement in the experiments. A majority of Vietnamese learners comprised a convenience sample of volunteers at University of Foreign Languages (HUCFL) in Hue, Vietnam contacted via snowball technique, and the remainder were



from my friends' referrals. According to the snowball technique, a pool of future participants are recruited through referrals made by initial sample group, and this approach is extensively used in qualitative sociological research (Crouse & Lowe 2018). The prospective NSs, on the other hand, were mainly selected via email address with the help from USQ. All native controls were recruited from the School of Education in USQ. The characteristics of the participants were summarised in Table 3.1.

**Table 3.1**

*Characteristics of Participants*

Descriptions	L1 Vietnamese participants (N= 36)	L1 English controls (N=36)
Age range	Mean age: 21.92 (Min: 18; Max: 27)	Mean age: 27.75 (Min: 19; Max: 35)
Gender	29 females and 7 males	31 females and 5 males
Years to exposure of English	Mean year: 12.3 (Min: 5; Max: 17.7)	
International English tests	B1 (3); B2 (7) IELTS (7); TOEIC (2)	
Number of students to know a third language	9 students	

As described in Table 3.1, the VLEs have an average of 12.3 years' exposure to English, and many of them had completed various types of international English language proficiency tests. In particular, seven had completed the International English Language Testing System (IELTS) with overall band scores ranging from 6.0 to 7.0; ten had completed the Common European Framework of Reference for Languages (CEFR) from B1 to B2 levels (intermediate and upper intermediate, respectively); two others had completed the Test of English for International Communication (TOEIC); and nine students had learnt a third language (i.e., Japanese, Korean, or French). Their English proficiency was thus generally considered to be at the upper-intermediate level.

I acknowledge that there have been some counterarguments in relation to the use of control groups in the experimental design, and their use to contribute to research findings. For example, an effect of so-called “comparative fallacy” was raised by Bley-Vroman (1983, p. 4) that “the learner’s system is worthy of study in its own right, not just as a degenerate form of the target system”. However, this does not specify that the control groups are excluded. In experimental designs, utilizing the control group helps to yield a baseline for comparison (Dörnyei, 2007), which is vital for the present study. Furthermore, the employment of control subjects makes sure that (i) the experimental tasks successfully ensure what they are going to investigate, and (ii) the investigated facts are as claimed in the theoretical literature (White, 2003).

### **3.3 Research project placement tests for selection of VLEs**

As described in Section 3.2, although all VLEs had appropriate levels of English proficiency according to the internationally recognised tests, for the purpose of the research, a further screening was conducted prior to final selection through (i) a research project placement test (i.e., a Michigan test) and (ii) a Word-Meaning Matching Task.

In SLA studies, a placement test was mainly used to test EFL/ ESL learners’ language skill level in order to place them in the appropriate experimental groups in the research. Since SLA research deals with learners from various language backgrounds and dissimilar expertise of L2, the use of proficiency assessment tests plays a key role in controlling the learners’ outcomes of the target language in accordance with the study objectives. This is because learners’ different proficiency of L2 may engender different effects on experimental outcomes (Tremblay, 2011). The literature (e.g., Marefat, 2005, Oh, 2010) reveals that low-level learners had many problems when acquiring the argument structure alternations. The L2 learners were therefore required to be at the upper-intermediate level of English for this research. Methodologically, the placement test results acted as a diagnostic tool for me to ensure that all selected learners were at the correct level of L2 proficiency. In reality, it is groundless to assess learners’ English proficiency on the basis of the chronological age or years of schooling (Mazurkewich, 1984). In the extant literature, learners’ English language proficiency has been sorted through varied measures such as TOEFL (Bley-Vroman & Yoshinaga, 1992; Bullock, 2004; Inagaki, 1997; Joo, 2003), Oxford placement tests (Agirre, 2015; Al-Jadani, 2016; Rezai & Avand, 2011; Yakhabi et al.,

2018), Michigan test (Juffs, 1996b; Marefat, 2005), or cloze tests (Mazurkewich, 1984; Montrul, 1997; Oh, 2010; Oh & Zubizarreta, 2005; Sung & Kim, 2020).

Aside from the proficiency test, the experimenter had to make sure that all the participants were familiar with all the test verbs prior to doing the experimental tasks. The basic ground for this is that verbs play a key role in determining argument realisation options (Hovav & Levin, 2008; Jackendoff, 2002). If learners encounter unfamiliar verbs, their syntactic behaviour cannot be acquired no matter how proficient learners are in English (Bley-Vroman & Yoshinaga, 1992; Juffs, 1996b). Following previous studies, learners were pre-tested verb meanings with some tasks like a vocabulary translation task (Montrul, 1997; Oh & Zubizarreta, 2005), or picture-vocabulary matching task (Bullock, 2004; Juffs, 1996b; Le, 2006).

On this account, all prospective Vietnamese participants were engaged in these two paper-based placement tests prior to final selection for participation in the research. The formats and the VLEs' scores of the Michigan test and the Word-Meaning Matching Task used in this research are fully described in Sections 3.3.1 and 3.3.2, respectively.

### 3.3.1 Michigan test

Since lexicon-syntax interface is an important feature of argument structures, I adopted Juffs' (1996b) testing approach that two extracted sections of grammar and vocabulary from textbook Michigan (Moutsou, 2008) were used as a placement test. The test included a total of 70 questions, all of which were in a multiple-choice format (See Appendix A). Test-takers were allotted 30 minutes to complete it. To be eligible for the project, they needed to obtain at least 35 correct answers. Table 3.2 summarises VLEs' details of Michigan test score.

**Table 3.2**

*VLEs' Michigan Test Results*

Michigan test results	
Mean	53.8
Mode	53
Minimum	40
Maximum	69

Table 3.2 shows that VLEs' average test score is 53.8 out of 70. This means that all VLEs attained at least the upper-intermediate level of English. A total of 40 VLEs took the Michigan test, but four of them were disqualified for the experimental task, leaving 36 eligible participants.

### **3.3.2 Word-meaning matching task**

In this research, due to the wide range and abstract meanings of the research project test verbs, a 15-minute matching test was employed. This task totalled 56 vocabulary verbs selected for the three experiments. Since a couple of verbs have similar meanings (e.g., *send* cf. *ship*; *build* cf. *construct*; *pollute* cf. *contaminate*), they were placed in three different parts (see Appendix B). All Vietnamese prospective subjects were required to match the test vocabulary words in the first column with their most equivalent Vietnamese meaning in the second column and to write their answers in the last column. Some verbs that were not used are also added with a view to increasing the test validity. To be retained in the research, subjects were required to give correct answers to all questions. There were three Vietnamese participants who could not pass the Word-Meaning Matching Task.

### **3.4 The Grammatical Judgement Task**

In this study, the research data collection instrument comprised of a survey entitled the Grammatical Judgement Task (GJT). To date, the GJT, elsewhere called acceptability judgment task, has been pervasively administrated in the domain of L2 syntax. In this research, one untimed GJT was designed by using the University's survey tool (<https://surveys.usq.edu.au>). The survey results were then obtained over the internet

from the survey site. In the control group, the GJT was an unsupervised task<sup>30</sup> and the NSs needed to do it in a private location where they were not disturbed (e.g., in a room in their home or at the university). By contrast, the VLEs did the task with the presence of a research assistant.

All stimulus sentences were judged over five-point Likert scales which have been widely used to collect the data in multilevel disciplines, especially in the educational setting (Norman, 2010). Although various theories shaped the number of scale points, a five-point scale with a neutral point, in this research, was optimal since subjects were only required to distinguish between slight and substantial learning from one side to the other (Krosnick & Fabrigar, 1997). Taking this into account, the plausibility of all experimental items (i.e., the stimuli plus the fillers) were rated on the five-point scale: 1='definitely unacceptable', 2='unacceptable', 3='neither unacceptable nor acceptable', 4='acceptable' and 5='definitely acceptable', as illustrated in Figure 3.1.

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<sup>30</sup> Due to COVID-19, the experimenter could not conduct a face-to face meeting for the data collection with the NSs. Instead, all eligible NSs were sent a link to do the task via email without the presence of the researcher. Although, some concerns could be raised over the fact that the NSs could have used references when rating the stimulus sentences, I believe that the validity of the data collection process was not violated because of the following reasons:

- Strictly speaking, the participants could always find various ways to use references, even with the attendance of the researcher, since their computer needed to be connected to the Internet for the task. The researcher could not look at their screen all the time as this could exert a negative impact on their performance. Therefore, participants' self-awareness was an important factor in experimental tasks.

- Also, I could not find any persuasive reasons that the NSs would use references when doing the experimental tasks. The task was not an exam, and they all were informed that the data were confidential and were only used for the purposes of SLA research. Hence, I believe that the NSs' performance strongly reflected their real performance when most of them had significantly low correct acceptability in some verbs (e.g., *carry* or *transfer*).

### Figure 3.1

#### *A Screenshot of the GJT*

**Part 1**

This is the first part of the task. You are required to judge the **grammatical acceptability** of each English sentence. There are five answer options for each sentence: please choose the one that seems most suitable to you. There is no time limit for responding to each sentence. You can choose the option 'Neither unacceptable nor acceptable' if you are not sure about the acceptability of the sentence. However, you are encouraged to make the best judgement that you can. When you move to the next page, you cannot go back to change your response.

**\*She recovered the accountant a debt.**

Choose one of the following answers

☐ Definitely unacceptable

☐ Unacceptable

☐ Neither unacceptable nor acceptable

☐ Acceptable

☐ Definitely acceptable

Next

### 3.5 Materials

Overall, the study's three experiments involved a total of 56 English verbs, which were used in 112 English stimulus sentences. Additionally, there were also 64 Vietnamese sentences (for the VLEs only) distributed as follows:

Experiment 1: 32 English sentences and 32 translated Vietnamese sentences.

Experiment 2: 32 English sentences and 32 translated Vietnamese sentences.

Experiment 3: 48 English sentences.

Once I developed L1 items (Vietnamese-language version), the sole groundwork for this was to scrutinise L1 transfer, whereas the L2 task was for testing the VLEs' native-like competence, markedness, and the morphological constraint. I dropped L1 task in Experiment 3 because there was a lack of syntactic consistency of locative structures between the two languages as argued in Chapter 2. In the following sections, the materials used in each experiment are described.

### 3.5.1 Experiment 1

This experiment comprised a total of 16 English dative verbs which fell into two types, as depicted in Table 3.3.

**Table 3.3**

*Types of Dative Verbs*

Type 1	Type 2
Alternating verbs	Nonalternating verbs
Carry	Transport
Give	Donate
Pass	Transfer
Send	Submit
Ship	Deliver
Show	Illustrate
Teach	Explain
Tell	Express

In Table 3.3, the verbs in pairs per row have nearly synonymous semantic fields (e.g., *carry* cf. *transport*) but noticeably distinctive syntactic distributions. Verbs of Type 1 involved alternating verbs, whereas verbs of Type 2 were nonalternating ones. One more feature in Table 3.3 was that, most verbs of Type 1 were of native stock<sup>31</sup>, whereas those of Type 2 had Latinate origin. The groundwork for this selection is that verbs with similar meanings have some tendency to occur in the same syntactic frame (Levin, 1993; Levin & Hovav, 1998; Yi & Koenig, 2016). This aimed to examine the overgeneralisation and the morphological constraint.

To accomplish the research objectives, i.e., native-like competence,

<sup>31</sup> Although *carry* is checked to have a Latinate root as verbs in Type 2, I still group this verb in Type 1 for cross comparisons between verb types since it alternates (Green, 1974; Levin, 1993). Some other linguists (e.g., Beavers & Koontz-Garboden, 2020; Gropen et al., 1989) regard this verb amongst the members that do not alternate. Regardless of its syntactic realisation, the data revealed that such grouping of this verb did not affect the outcome of the hypothesis of morphology constraint.

markedness, and morphological constraint, all participants were required to judge each verb in relation to two variants, as in exemplars (3.1) and (3.2).

- (3.1)           a. He sent a letter to his friend.  
                  b. He sent his friend a letter.
- (3.2)           a. He submitted some requests to the manager.  
                  b. \*He submitted the manager some requests.

In doing so, I could examine whether the participants distinguished the PDCs from the DODCs within each verb class, or whether they differentiated the alternating class as in (3.1) from the nonalternating class as in (3.2).

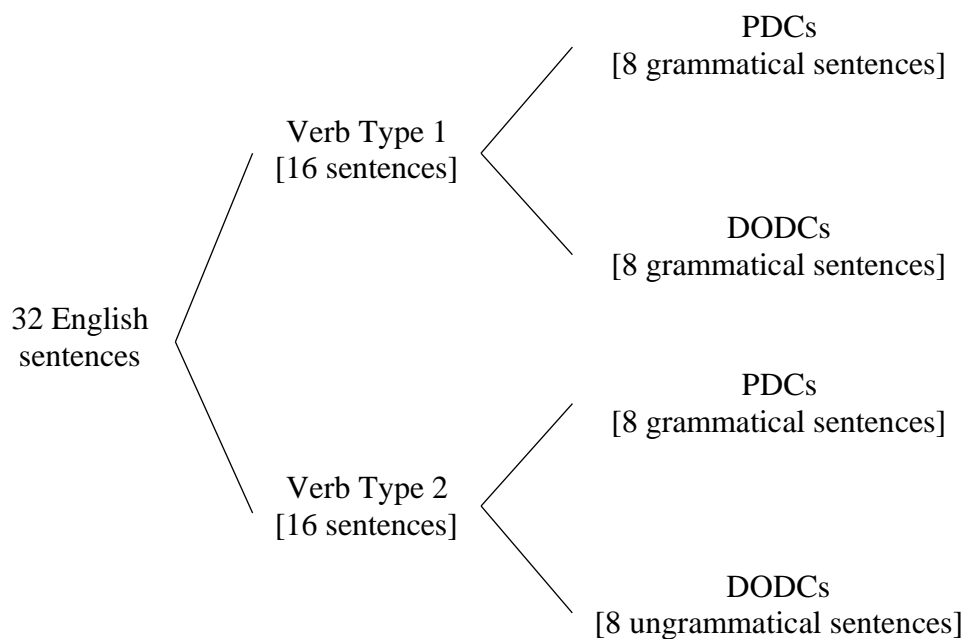
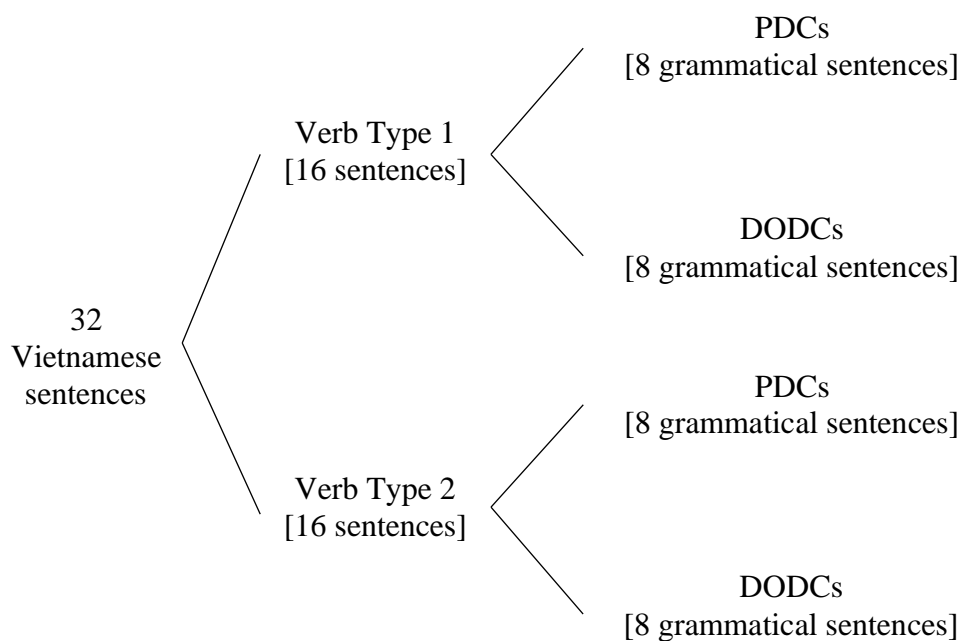
All 32 English sentences were then translated into Vietnamese by the researcher<sup>32</sup>. To ensure the naturalness and accuracy of the Vietnamese translations, I had my wife, who is a Vietnamese with a PhD in linguistics, do the revisions. A motive behind this approach was that I wanted to examine whether VLEs' acceptability ratings in L1 Vietnamese could predict their ratings in L2 English. It is important to recall that while English verbs of Type 2 are only compatible with the PDCs, their equivalent translations in Vietnamese occur in two dative patterns. Therefore, the impact of L1 on L2 was tested due to the lack of positive evidence in L1. The diagram of stimuli is presented in Figures 3.2 and 3.3.

To minimise potential effects of other factors, such as the repetition effects, on the acquisition of the constructions in the experiments, 64 experimental items from Experiments 2 and 3 were treated as fillers (e.g., *He loaded the truck with hay*) in this experiment. The fillers aimed at preventing the participants from the repetition effects or guessing the real purpose of the experiment.

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<sup>32</sup> Standard Vietnamese, which is based on the northern dialect (or known as Hanoi dialect), is widely used in the media. This prestige dialect is officially taught in the Vietnam school system (Pham & McLeod, 2016), in which Literature is a compulsory subject from grade 1 to 12. Also, Literature is mandatory in all high school and university entrance examinations. In remote areas, indigenous preschool children are taught with Vietnamese as an L2 (Vu, 2020). For these reasons, the translations in this thesis employed this major dialect so that all participants could find it easy to understand the Vietnamese sentences.



**Figure 3.2***Breakdown of L2 Dative Stimuli***Figure 3.3***Breakdown of L1 Dative Stimuli*

All targets were put in the simple past tense. If various complicated tenses (e.g., present perfect or past perfect) were used across the items, the participants could have found it harder and confused when rating the sentences. Furthermore, the idiom-like constructions (e.g., *she gave the walls a new colour*) were not employed as they were assumed to be marked within a specific language and thus not a candidate to transfer (Kellerman, 1979).

To augment the reliability of data collection, the two variants of each verb were matched in every respect except for the relative ordering of theme and recipient (e.g., *He sent a letter to the teacher* vs. *He sent the teacher a letter*). A total of eight different syntactical patterns were applied for eight verb pairs, as depicted in Table 3.4. This approach contributed to increasing data validity, and inclusion of various patterns helped to avoid the monotony and repetition of the structures.

**Table 3.4**

*Verb Pairs and Their Syntax Distribution in English DA*

Verb pairs	Applied syntactic patterns	Example sentences
Give	S-V- a/an N1-to-his/her N2	He gave a book to his child.
	S-V-his/her N2- a/an N1	He gave his child a book.
Teach	S-V- a/an N1-to-his/her N2s	He taught a song to his children.
	S-V-his/her N2s- a/an N1	He taught his children a song.
Show	S-V- a/an N1-to-the N2	He showed a house to the engineer.
	S-V-the N2- a/an N1	He showed the engineer a house.
Ship	S-V- a/an N1-to-the N2s	She shipped a parcel to the farmers.
	S-V-the N2s- a/an N1	She shipped the farmers a parcel.
Tell	S-V-some N1s-to-his/her N2	He told some secrets to his lawyer.
	S-V-his/her N2-some N1s	He told his lawyer some secrets.
Pass	S-V-some N1s-to-his/her N2s	She passed some notebooks to his pupils.
	S-V-his/her N2s-some N1s	She passed his pupils some notebooks.
Send	S-V-some N1s-to-the N2	She sent some letters to the teacher.
	S-V-the N2-some N1s	She sent the teacher some letters.
Carry	S-V-some N1s-to-the N2s	She carried some presents to the friends.
	S-V-the N2s-some N1s	She carried the friends some presents.

Empirical evidence from previous studies has corroborated that the dative choice is influenced by various factors (e.g., Jäschke and Plag, 2016; Uçkun, 2015). To keep these effects to a minimum, as described in Table 3.4, I used pronominal subjects (i.e., *he* or *she*) for all experimental items. Both theme and recipient were in the full NPs as the pronominalisation of themes could affect the alternation of dative verbs (*He sent it to Mary* cf. *\*He sent Mary it*). Since the heavy NP shift was regarded as an aspect to have an effect on the acceptability of the DA, the stimuli were not in a complex or compound form (e.g., *He sent his mother a book that he had borrowed from the library yesterday* or *He sent his mother a book and he went to the library*). Rather, all stimuli were simple sentences, and half of which had either seven tokens or six tokens. I targeted the design of a well-balanced set of stimulus sentences that had mixed hallmarks of all these criteria. The acceptability of each verb type in the two languages is summarised in Table 3.5.

**Table 3.5**

*Crosslinguistic Acceptability of Dative Variants*

Language	Type 1		Type 2	
	PDC	DODC	PDC	DODC
English	Yes	Yes	Yes	No
Vietnamese	Yes <sup>33</sup>	Yes	Yes	Yes

*Note.* Yes: the given structure of that verb type is allowed; No: the given structure of that verb type is not allowed (See Section 2.3.6 for detailed discussion).

### 3.5.2 Experiment 2

The data organization of Experiment 2 is analogous to that of Experiment 1. There

<sup>33</sup> As mentioned in Section 2.2.3, the preference of dative variances in L1 can be affected by the principle ‘phonetic harmony’ (L. D. Nguyen, 1975, p. 42), denoting that the shorter post verbal constituent is placed before the longer one. In this experiment, this effect has been eliminated so that the meanings of two L1 dative variants are natural to VLEs.

were two type types of verbs investigated in this experiment.

**Table 3.6**

*Types of Benefactive Verbs*

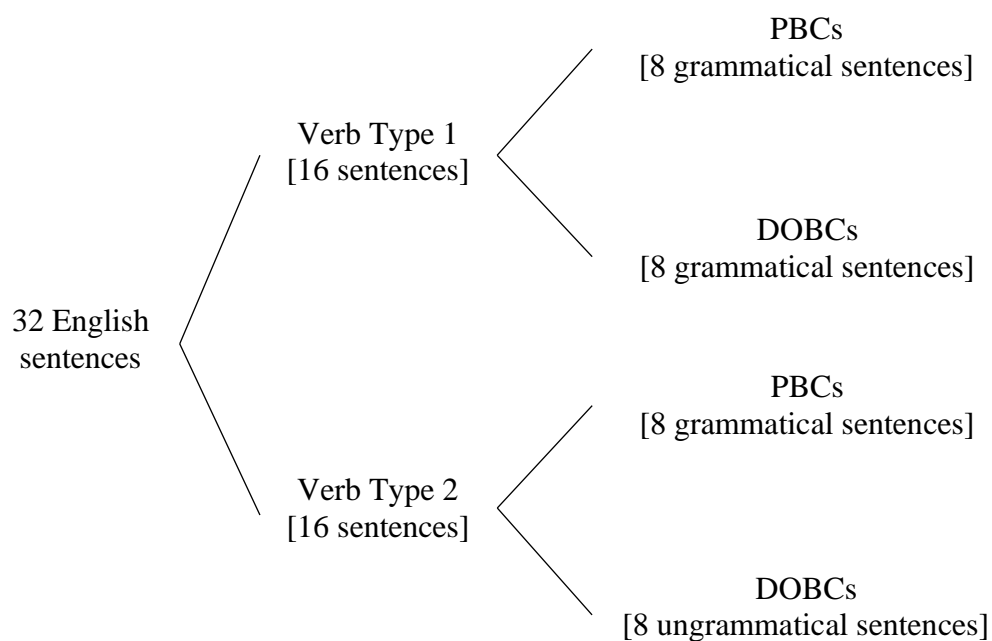
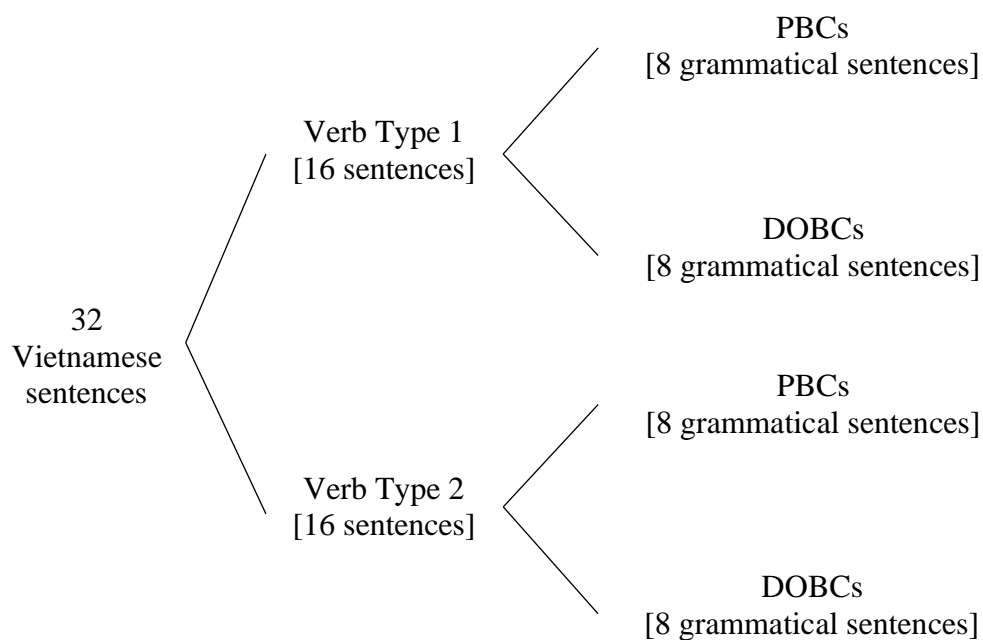
Verb Type 1	Verb Type 2
Alternating verbs	Nonalternating verbs
Build	Construct
Buy	Purchase
Earn	Collect
Gain	Receive
Get	Obtain
Make	Create
Win	Recover
Write	Compose

In Table 3.6, the verbs per row were selected in terms of being synonymous with each other (e.g., *build* cf. *construct*) but had varied syntactic distributions. Verbs of Type 1 can occur in two benefactive patterns, whereas verbs of Type 2 are licit in the PBCs only. Two patterns were constructed for each verb, as in (3.3) and (3.4).

- (3.3)           a. She bought some gifts for her daughters.  
                   b. She bought her daughters some gifts.

- (3.4)           a. She purchased some flowers for her friends.  
                   b. \*She purchased her friends some flowers

In this experiment, Type 1 included monosyllabic verbs of native origin, whereas Type 2 consisted of polysyllabic verbs of Latinate origin. Like Experiment 1, 32 English benefactive sentences in Experiment 2 were also translated into Vietnamese. All items in Vietnamese were grammatical in both patterns. The morphological constraint and the overgeneralisation were tested in this experiment. The diagrammatic details of these stimulus sentences are illustrated in Figures 3.4 and 3.5.

**Figure 3.4***Breakdown of English Benefactive Stimuli***Figure 3.5***Breakdown of Vietnamese Benefactive Stimuli*

Experimental items from Experiments 1 and 3 were treated as fillers in this experiment. Each pair of verbs was assigned with the same syntactical pattern, and there is a total of eight patterns for eight pairs, as in Table 3.7.

**Table 3.7***Syntax Distribution of Alternating Verbs in the English BA*

Alternating verbs	Syntactic patterns	Example sentences
Write	S-V-a/an N1-for-his/her N2	He wrote a book for his publisher.
	S-V-his/her N2- a/an N1	He wrote his publisher a book.
Build	S-V- a/an N1-for-his/her N2s	He built a shed for his parents.
	S-V-his/her N2s- a/an N1	He built his parents a shed.
Win	S-V- a/an N1-for-the N2	He won a prize for the child.
	S-V-the N2- a/an N1	He won the child a prize.
Make	S-V- a/an N1-for-the N2s	He made a table for the customers.
	S-V-the N2s- a/an N1	He made the customers a table.
Get	S-V-some N1s-for-his/her N2	He got some presents for his mother.
	S-V-his/her N2-some N1s	He got his mother some presents.
Buy	S-V-some N1s-for-his/her N2s	She bought some books for her students.
	S-V-his/her N2s-some N1s	She bought her students some books.
Earn	S-V-some N1s-for-the N2	She earned some jobs for the worker.
	S-V-the N2-some N1s	She earned the worker some jobs.
Gain	S-V-some N1s-for-the N2s	She gained some benefits for the farmers.
	S-V-the N2s-some N1s	She gained the farmers some benefits.

The acceptability of each verb type in both English and Vietnamese is summarised in Table 3.8.

**Table 3.8***Crosslinguistic Acceptability of Benefactive Variants*

Language	Type 1		Type 2	
	PBCs	DOBCs	PBCs	DOBCs
English	Yes	Yes	Yes	No
Vietnamese	Yes	Yes*	Yes	Yes*

*Note.* \*: The given structure exists with the preposition *cho* ‘for’ (See Section 2.4.8 for detailed discussion).

### 3.5.3 Experiment 3

The materials of Experiment 3 totalled 24 locative verbs, and all of which were equally divided into three types of verbs: alternating verbs, figure verbs, and ground verbs, as in Table 3.9.

**Table 3.9**

*Types of Locative Verbs*

Type 1	Type 2	Type 3
Alternating verbs	Figure verbs	Ground verbs
Brush	Arrange	Contaminate
Load	Drip	Cover
Hang	Install	Decorate
Pack	Lay	Fill
Plant	Lift	Flood
Spray	Pour	Pollute
Spread	Put	Soak
Wrap	Spill	Surround

All verbs of three verb types were investigated in two locative variants, as in (3.5) to (3.7), respectively.

- (3.5) a. She hung blankets on the string.  
b. She hung the string with blankets.

- (3.6) a. She put boxes on her shelves.  
b. \*She put her shelves with boxes.

- (3.7) a. \*He surrounded fences around the gardens.  
b. He surrounded the gardens with fences.

The various syntax distributions were also applied to all locative variants. There were

eight different syntactical patterns applied to all sets of stimulus sentences. All the stimuli of Experiments 1 and 2 were chosen as fillers. Despite my wish to conduct the L1 sentences as in Experiments 1 and 2, the cross-linguistic non-homogeneity of the locative constructions made this impossible (See Table 3.12 for the distribution of locative verbs in two languages). The stimuli in Experiment 3 were diagrammed in Figure 3.6.

**Figure 3.6**

*Breakdown of English Locative Stimuli*

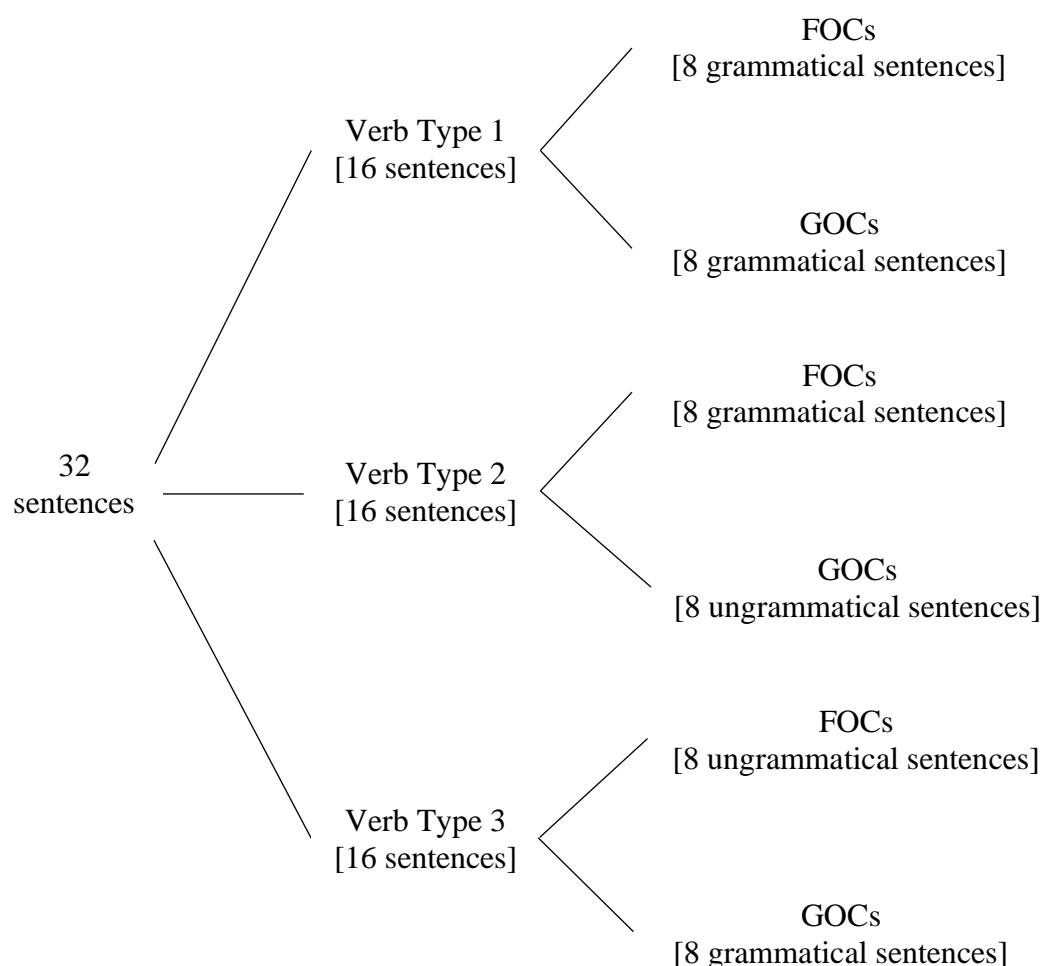


Table 3.10 below illustrates alternating locative verbs and their syntactic distribution in English LA.



**Table 3.10***Alternating Locative Verbs and Their Syntactic Distribution in English LA*

Verb pairs	Syntactic patterns	Example sentences
Brush	S-V- N1-PREP-the N2	She brushed butter over the chicken.
	S-V-the N2-with N1	She brushed the chicken with butter.
Load	S-V- N1-PREP-his/her N2	He loaded cargo onto his truck.
	S-V-his/her N2-with N1	He loaded his truck with cargo.
Hang	S-V- N1s-PREP-the N2	He hung towels on the line.
	S-V-the N2-with N1s	He hung the line with towels.
Plant	S-V- N1s-PREP-his/her N2	She planted herbs in her garden.
	S-V-his/her N2-with N1s	She planted her garden with herbs.
Spread	S-V- N1-PREP-the N2s	She spread honey on the pancakes.
	S-V-the N2s-with N1	She spread the pancakes with honey.
Spray	S-V- N1-PREP-his/her N2s	He sprayed paint onto his walls.
	S-V-his/her N2s-with N1	He sprayed his walls with paint.
Wrap	S-V- N1s-PREP-the N2s	He wrapped ribbons around the boxes.
	S-V-the N2s-with N1s	He wrapped the boxes with ribbons.
Pack	S-V- N1s-PREP-his/her N2s	She packed gifts into her suitcases.
	S-V-his/her N2s-with N1s	She packed her suitcases with gifts.

Table 3.11 below summarises the distribution of LA in English and Vietnamese.

**Table 3.11***Crosslinguistic Acceptability of Locative Variants*

Language	Verb Type 1		Verb Type 2		Verb Type 3	
	FOCs	GOCs	FOCs	GOCs	FOCs	GOCs
English	Yes	Yes	Yes	No	No	Yes
Vietnamese	Yes	?	Yes	?	?	Yes

*Note.* ?: There is some inconsistent acceptability for the given construction (See Section 2.5.6 for detailed discussion).

In Table 3.11, some anomalous differences of locative structures between the two languages concerning the GOCs of Types 1 and 2, and Type 3 FOCs have been found. In particular, as discussed in Section 2.5.6 regarding the cross-linguistic locative structures, the distribution of the target locative verbs is summarised in Table 3.12.

**Table 3.12**

*Crosslinguistic Acceptability of Locative Verbs in L1 Vietnamese*

Verbs in L1	Structure	
Verb Type 1	FOC	GOC
Quét ‘brush’	Yes	Yes
Treo ‘hang’	Yes	No
Chất ‘load’	Yes	No
Gói ‘pack’	Yes	Yes
Trồng ‘plant’	Yes	No
Phun ‘spray’	Yes	No
Trải ‘spread’	Yes	Yes
Gói ‘wrap’	Yes	Yes
Verb Type 2	FOC	GOC
Sắp xếp ‘arrange’	Yes	No
Nhỏ giọt ‘drip’	Yes	No
Cài đặt ‘install’	Yes	Yes
Đặt ‘lay’	Yes	No
Nhấc ‘lift’	Yes	No
Đổ ‘pour’	Yes	No
Đặt ‘put’	Yes	No
Làm tràn ‘spill’	Yes	No
Verb Type 3	FOC	GOC
Làm ô nhiễm ‘contaminate’	No	Yes
Bao phủ ‘cover’	Yes	Yes

Verbs in L1	Structure	
Trang trí ‘decorate’	Yes	Yes
Làm đầy ‘fill’	Yes	Yes
Làm ngập ‘flood’	No	Yes
Làm ô nhiễm ‘pollute’	No	Yes
Ngâm ‘soak’	Yes	Yes
Bao quanh ‘surround’	Yes	Yes

*Note.* Yes: the given structure of that verb type is allowed; No: the given structure of that verb type is not allowed (See Section 2.5.6 for detailed discussion).

As can be seen in Table 3.12, there are some verbs that are used in similar or different dative structures in the two languages. In further detail, we can see English locative verbs in licit Type 1 FOCs and Type 3 GOCs do have their equivalent verbs in L1 Vietnamese. However, concerning the remaining verb classes, there is an inconsistent distribution of L1 locative verbs in the two languages. This cross-linguistic similarities and dissimilarities will be used to examine the L1 transfer in Chapter 4.

### 3.6 Task procedure

All participants were required to rate 112 English sentences which were equally divided into two parts. The VLEs also had to complete the third part of 64 L1 items which were translated from their equivalent L2 items. Between each part was an interval of a 20-minute break for participants, making sure that no fatigue or stress occurred for them, in order to help maximise their performance. The participants could have a longer break if necessary. To strengthen the validity and reliability of the data collection, each part only included one variant of the DA, BA or LA. For example, *she bought some books for her students* was in Part 1, and *she bought her students some books* was in Part 2. Following this approach, the experimenter wanted to make sure that all subjects would not experience two variants with the same verb close to each other. Besides, all of the stimuli were automatically randomised within each part so that no two subjects in either group would be presented with the items in the same order.

Prior to taking the experiments, all participants were required to complete an

online questionnaire which included demographic information including their English language learning experience, their length of stay overseas, and their area of study, and other relevant demographic information. None of the participants had any neurocognitive impairments, plus they had normal or corrected to normal vision<sup>34</sup>. They were also informed that all their private information and experimental responses would be strictly confidential, and would be used for research purposes only. All participants were required to use a computer with Internet access to do the GJT.

Prior to the official experimental tasks, the participants were required to do an online training session with three example sentences each of which was representative of each experiment so that they could become familiar with the task procedure, as in 3.8.

- (3.8) a. She pushed a suitcase to her mother.  
       b. \*He selected his brother a house.  
       c. She piled the boxes on the shelf.

Like the official task, there was also no time limit for responding each sentence. The instruction for the VLEs was in Vietnamese language so that all of them could understand all the task requirements. Furthermore, the researcher assistant was always there to clarify any participants' inquiries.

Although the experimental tasks were mainly concerned with English and Vietnamese syntax, the participants were informed that this was not a grammar test, and that they should try to answer all the sentences according to their own usage of English (Davies, 1994). According to the task design, at no time were they allowed to go back to check or change their answers when they encountered another similar item. They could do this experiment at their own pace in one consecutive time frame, as there was no time constraint. This aimed to encourage the participants to do the tasks under close scrutiny.

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<sup>34</sup> My assumption is based on Circular No. 10/2016/TT-BGDDT of the Ministry of Education and Training (2016, p. 29) that all students are required to have full health examinations at the beginning and periodically during their study. Put differently, they have to meet all of the health requirements required so that they are eligible to continue their programs.

To sum up, the order of administration of three experiments was conducted in a sequence: the Word-Meaning Matching Task → the Michigan test → the demonstration section → the demographic questionnaire → the training examples → the GJT (Please note that the Word-Meaning Matching Task and the Michigan test were excluded for the NSs).

### **3.7 Research questions and hypotheses**

#### **3.7.1 Experiment 1**

The objectives of this experiment were to uncover native-like competence, the language transfer, the markedness, as well as the morphological constraint affecting the learners' acquisition of the DA. From the literature review, four research questions (RQ) drove this experiment:

RQ1: Do learners attain native-like competence of English dative structures?

RQ2: Are the VLEs sensitive to the markedness?

RQ3: Will VLEs' acceptability ratings in L1 predict their ratings in L2?

RQ4: Are the VLEs sensitive to the morphological constraint?

In Chapter 2, I have proved that both DODCs and PDCs of Verb Type 1 feature analogously grammatical properties in both languages. However, in Type 2 structures, only PDCs share the same syntactic properties with their counterparts in Vietnamese. From this perspective, I hypothesise that the VLEs will transfer their L1 dative structures (whether positive or negative) to the L2 DA. Additionally, the markedness and morphological constraints were expected to have an influence on the learners' acquisition of the DA.

To answer the research questions, both null and experimental hypotheses were formed. Four hypotheses in Experiment 1 are formulated in Table 3.13.

**Table 3.13***List of Null/ Experimental Hypotheses for Experiment 1*

Areas	Hypothesis Notation	Hypotheses (Null/ Experimental)
Native-like competence	H1 <sub>O</sub> (i-iv)	There is no difference between the VLEs' and NSs' performance on the judgments of each dative structure: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.
	H1 <sub>O</sub> (i-iv)	The VLEs will rate the dative structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.
Markedness	H2 <sub>O</sub> (i-ii)	There is no difference in the VLEs' performance on the judgments between the PDCs and the DODCs within each verb type: Verb Type 1 and Verb Type 2.
	H2 <sub>E</sub>	For verbs of Types 1 and 2, the VLEs will rate the PDCs at higher levels of acceptability than the DODCs.
Transfer	H3 <sub>O</sub> (i-iv)	The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each dative structure: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.
	H3 <sub>E</sub> (i-iv)	For each dative structure, the VLEs' acceptability ratings in L1 will predict their ratings in L2: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.
Morphological constraint	H4 <sub>O</sub>	There is no difference in the VLEs' performance on the judgments between Type 1 DODCs and Type 2 DODCs.
	H4 <sub>E</sub>	The VLEs will rate Type 1 DODCs at higher levels of acceptability than Type 2 DODCs.

*Note.* H<sub>O</sub>: Null Hypothesis, H<sub>E</sub>: Experimental Hypothesis.

### 3.7.2 Experiment 2

Experiment 2 had similar objectives as Experiment 1. Plus, in this experiment, the asymmetries between the acquisition of the DA and the BA were also tested.

RQ1: Do learners attain native-like competence of English benefactive structures?

RQ2: Are the VLEs sensitive to the markedness?

RQ3: Do VLEs' acceptability ratings in L1 predict their ratings in L2?

RQ4: Are the VLEs sensitive to the morphological constraint?

RQ5: What are asymmetries between dative and benefactive structures?

As discussed in Chapter 2, I predicted the blocking effect of the mandatory preposition *cho* 'for' for licit as well as illicit DOBCs. Hence, the learners were expected to reject all DOBCs (whether licit or illicit). In other words, I expected the learners would obtain more correct responses for Type 2 DOBCs than those of Type 1 DOBCs. In the literature, the DODCs are considered unmarked, whilst the DOBCs are more marked (Oh, & Zubizarreta, 2005). In light of this, five hypotheses were postulated, as described in Table 3.14.

**Table 3.14**

*List of Hypotheses for Experiment 2*

Areas	Hypothesis Notation	Hypotheses (Null/ Experimental)
Native-like competence	H1 <sub>O</sub> (i-iv)	There is no difference between the VLEs' and NSs' performance on the judgments of each benefactive structure: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.
	H1 <sub>O</sub> (i-iv)	The VLEs will rate the benefactive structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.

Areas	Hypothesis Notation	Hypotheses (Null/ Experimental)
Markedness	H2 <sub>O</sub> (i-ii)	There is no difference in the VLEs' performance on the judgments between the PBCs and the DOBCs within each verb type: Verb Type 1 and Verb Type 2.
	H2 <sub>E</sub> (i-ii)	The VLEs will rate the PBCs at higher levels of acceptability than the DOBCs within each verb type: Verb Type 1 and Verb Type 2.
Transfer	H3 <sub>O</sub> (i-iv)	The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each benefactive structure: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.
	H3 <sub>E</sub> (i-iv)	VLEs' acceptability ratings in L1 will predict their ratings in L2: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.
Morphological constraint	H4 <sub>O</sub>	There is no difference in the VLEs' performance on the judgments between Type 1 DOBCs and Type 2 DOBCs.
	H4 <sub>E</sub>	The VLEs will rate Type 1 DOBCs at higher levels of acceptability than Type 2 DOBCs.
PDC-PBC comparisons	H5 <sub>O</sub> (i-ii)	There is no difference in the VLEs' performance on the judgments between the PDCs and the PBCs within each verb type: (i) Verb Type 1 and (ii) Verb Type 2.
	H5 <sub>E</sub> (i-ii)	The VLEs will rate the PDCs at higher levels of acceptability than the PBCs: (i) Verb Type 1 and (ii) Verb Type 2.
DODC-DOBC comparisons	H6 <sub>O</sub> (i-ii)	There is no difference in the VLEs' performance on the judgments between the DODCs and the DOBCs within each verb type: (i) Verb Type 1 and (ii) Verb Type 2.
	H6 <sub>E</sub> (i-ii)	The VLEs will rate the DODCs at higher levels of acceptability than the DOBCs: (i) Verb Type 1 and (ii) Verb Type 2.



### 3.7.3 Experiment 3

The last experiment was guided by three research questions, as follows.

RQ1: Do learners attain native-like competence of English locative structures?

RQ2: Does learners' L1 transfer have an influence on their acquisition of English locative alternations?

RQ3: Are learners sensitive to differences of locative structures?

From the literature review, learners were very likely to face many challenges of acquiring the locative structures. They have more correct responses of the FOCs (Bullock, 2004; Juffs, 1996b; Yakhabi et al., 2018). Furthermore, given the syntactic similarities and differences between the two languages as described in Table 3.12, I was able to formulate a number of hypotheses regarding the transfer in each locative structure. That is, the positive transfer is assumed to happen to Type 1 FOCs, Type 2 FOCs, and Type 3 GOCs. The learners were thus expected to attain native-like competence for these structures. The remaining structures were assumed to receive lower ratings owing to the negative transfer. Table 3.15 provides the list of hypotheses for Experiment 3.

**Table 3.15***List of Null/ Experimental Hypotheses for Experiment 3*

Areas	Hypothesis Notation	Hypotheses (Null/ Experimental)
Native-like competence	H1 <sub>O</sub> (i-vi)	There is no difference between the VLEs' and NSs' performance on the judgments of each locative structure: (i) Type 1 FOCs, (ii) Type 1 GOCs, (iii) Type 2 FOCs, (iv) Type 2 GOCs, (v) Type 3 FOCs, and (vi) Type 4 GOCs.
	H1 <sub>E</sub> (i-vi)	The VLEs will rate the locative structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 FOCs, (ii) Type 1 GOCs, (iii) Type 2 FOCs, (iv) Type 2 GOCs, (v) Type 3 FOCs, and (vi) Type 4 GOCs.
FOC-GOC comparisons	H2 <sub>O</sub>	There is no difference in the VLEs' performance on the judgments between the FOCs and the GOCs within each verb type: (i) Verb Type 1, (ii) Verb Type 2, and (iii) Verb Type 3.
	H2(i) <sub>E</sub>	For Verb Type 1, the VLEs will rate the FOCs at higher levels of acceptability than the GOCs.
	H2(ii) <sub>E</sub>	For Verb Type 2, the VLEs will rate the FOCs at higher levels of acceptability than the GOCs.
	H2(iii) <sub>E</sub>	For Verb Type 3, the VLEs will rate the GOCs at higher levels of acceptability than the FOCs.
Comparisons of Verb Types	H3 <sub>O</sub>	There is no difference in the VLEs' performance on the judgments across verb types.
	H3 <sub>E</sub>	There is a difference in the VLEs' performance on the judgments across verb types.

### **3.8 Conclusion**

In conclusion, this chapter has described a comprehensive picture of the research methodology that was employed in the three experiments. A total of 72 Vietnamese and Australian participants were recruited for the research: 36 VLEs and 36 NSs. All potential Vietnamese learners were screened prior to final selection to participate in the research by means of a Word-Meaning Matching Task and a Michigan test. This ensured that they knew all the test verbs, and had the appropriate level proficiency of English. Regarding the research objectives, Experiments 1 and 2 focused on the learners' native-like competence, markedness, L1 transfer, morphological constraint, as well as the dative-benefactive asymmetries. In Experiment 3, the experimenter looked at the learners' native-like competence, L1 transfer, and their sensitivity to the locative variants across verb classes. Built on the objectives, various hypotheses were formulated in Sections 3.7.1, 3.7.2, and 3.7.3. To this end, all participants were required to give their judgements of a set of sentences on a five-point Likert scale by means of a GJT. In Experiments 1 and 2, each had 32 English sentences and 32 Vietnamese sentences which were translated from their counterparts in English. Experiment 3 consisted of only 48 English sentences. The native controls were not required to complete the Vietnamese sentences.

## CHAPTER 4: RESULTS AND DISCUSSION

### 4.1 Overview

In this thesis, the data analysis was performed with SPSS (version 26) in accordance with the hypotheses proposed in Section 3.7. Recall that the population sample involved 72 adult participants divided into 2 groups: an experimental group of 36 Vietnamese learners of English, and a control group of 36 native English speakers used as a benchmark for cross-group comparisons. All the participants were required to rate all stimulus sentences on a five-point Likert scale so the ratings were nested within participants. Such hierarchical data were suitable for using the multilevel model (MLM). Therefore, I conducted a multilevel analysis, where the datasets were organised in a tall format, with one observation per row, and multiple rows per subject. The associations between variances within-group as well as between-group relations were conducted within a single analysis (Snijders & Bosker, 2011). The significance level (or alpha level) was set at  $\alpha \leq .05$ .

As discussed in Chapter 3, Experiments 1 and 2 were comprised of L1 data which were collected from the learners, whilst Experiment 3 only employed L2 English sentences. The data aggregated showed that no missing data values were found. In order to check the internal consistency of a set of scale, Cronbach's alpha was computed at 0.873 for VLEs' dataset, and 0.944 for NSs' dataset. This means that the five-point Likert scale of the experimental tasks was proved to have very good reliability in both groups.

### 4.2 Experiment 1

In this experiment, I investigated 16 dative verbs which were equally categorised into two types: verbs of Type 1 (*carry, give, pass, send, ship, show, teach, tell*), and verbs of Type 2 (*transport, donate, transfer, submit, deliver, illustrate, explain, express*). Each verb of Type 1 was tested in two grammatical structures, whilst each verb of Type 2 was tested in a grammatical PDC and an ungrammatical DODC. This thus generated a total of 32 English sentences. In addition to that, 32 equivalent Vietnamese

sentences were only allocated for the Vietnamese learners. The stimulus sentences from other experiments (e.g., *He wrote a storybook for his son* or *She arranged chairs around her piano*) were regarded as the fillers, and were excluded in the data analysis. As a starting point, descriptive statistics of each verb within each construction were computed so that I could have a general outlook of acceptability ratings of each section. Separate MLMs were then run to look at the effects of *group*, *structure*, as well as *L1 ratings* on subjects' ratings.

#### 4.2.1 Summaries of acceptability-rating data

Recall from Section 3.4 that I used five response categories for the rating of each stimulus sentence, from the lowest to the highest. These were “1=completely unacceptable”, “2=unacceptable”, “3=neither unacceptable nor acceptable”, “4=acceptable”, and “5=completely acceptable”. This dataset consisted of eight alternating verbs and eight nonalternating verbs, all of which appeared in two dative variants. For verbs of Type 1, a response is considered to be correct if it is judged either “acceptable” or “definitely acceptable”. By the same token, a response is considered to be incorrect if it is judged either “unacceptable” or “definitely unacceptable”. Conversely, as to verbs of Type 2, the numerical scoring scale runs in the opposite direction for the DODCs. This means that the correct response is either “unacceptable” or “definitely unacceptable”, and the incorrect response is either “acceptable” or “definitely acceptable”, since the DODCs in this type are illicit. With respect to L1 Vietnamese items, items in both verb types are all acceptable so they were assumed to be judged either “acceptable” or “definitely acceptable”.

The two lowest categories were collapsed into a single new composite category, namely “unacceptable”, and a new category “acceptable” was formed from the combination of the two highest categories. To make it more convenient when comparing the response values between structures, response codes of the DOBCs of Type 2 verbs were reversed so that higher scores consistently reflected higher performance across all structures. This approach, however, was not adopted in the course of testing the transfer with the MLM. For the sake of consistency, this was completed for the response categories for the three experiments. A summary of the data collected from Experiment 1 is provided in Table 4.1.

**Table 4.1***Response of Datives by Percentage of Subjects*

Participant	Structure	Percentage of participants		
		unacceptable	neither unacceptable nor acceptable	acceptable
VLEs	L2 English			
	Type 1 PDCs	7.99	2.43	89.58
	Type 1 DODCs	23.61	3.13	73.26
	Type 2 PDCs	5.56	4.51	89.93
	Type 2 DODCs	43.06	13.54	43.40
	L1 Vietnamese			
	Type 1 PDCs	10.42	1.73	87.85
	Type 1 DODCs	6.94	2.78	90.28
	Type 2 PDCs	12.85	4.51	82.64
	Type 2 DODCs	25.00	4.86	70.14
NSs	Type 1 PDCs	4.16	5.56	90.28
	Type 1 DODCs	11.80	5.56	82.64
	Type 2 PDCs	4.86	4.51	90.63
	Type 2 DODCs	29.17	9.72	61.11

Table 4.1 delivers a breakdown of percentage of learners' responses obtained in each option. Here, I draw my attention to options "unacceptable" and "acceptable" as these reflect the learners' acquisition of the dative. The neutral option is only used when being analysed with MLMs. The most noticeable feature obtained from Table 4.1 is a considerably high percentage of the participants in both groups, providing correct responses to the PDCs in both verb types at face value. However, the correct response rate significantly decreased in the DODCs, especially verbs of Type 2, for which only 43.40% of the learners and 61.11% of the NSs had accurate acceptability ratings.

Though the dative-meaning items in L1 Vietnamese themselves were not the focus of the study, preliminary quantitative comparison of ratings of the two languages definitely cast additional light on interpretation of the language carry-over. Intuitively,

this figure summary is broadly consistent with the classification that Type 1 sentences alternate in both languages (see Table 3.5), although the two alternants are not equally acceptable in L1 English specifically. The ratings for L2 English and L1 English are similar in that the acceptability ratings were higher for the PDCs than the DODCs in each case. In the same vein, the ratings were lower for the DODCs in L2 English than L1 English. Nevertheless, perhaps the most striking feature of this summary is how different the pattern for L1 Vietnamese is from both of the patterns in English. Regarding NSs' ratings, it was realised that the NSs had more correct ratings than the VLEs in all dative variants, particularly Type 2 DODCs.

#### 4.2.2 Testing hypotheses

Let me turn to the testing of specific hypotheses. In this experiment, four hypotheses were tested with the MLMs. The first hypothesis was concerned with the learners' native-like performance which is repeated below for convenience.

H1(i-iv)<sub>O</sub>: There is no difference between the VLEs' and NSs' performance on the judgments of each dative structure: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.

H1(i-iv)<sub>E</sub>: The VLEs will rate the dative structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.

In Table 4.1, I can realise that the native controls obtained more accurate responses than the experimental groups in all dative variants. However, in order to test H1<sub>O</sub>, the two groups' performance needed to be compared on ratings for each dative structure. As such, four separate MLMs were created with fixed effect for *Group*. Random effects were *Participant* since these variables represent a sample from a larger population of interest (Pituch & Stevens, 2016). *L2 rating* was the dependent variable. The result for H1(i-ii)<sub>O</sub> is shown in Table 4.2.

**Table 4.2***Between-Group Comparisons of Ratings for Type 1 Dative Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
PDCs				
Intercept	4.403	.000	4.255	4.551
VLEs	-.069	.510	-.279	.140
Subject (variance)	.114			
Residual	.672			
DODCs				
Intercept	4.083	.000	3.886	4.281
VLEs	-.264	.064	-.543	.016
Subject (variance)	.188			
Residual	1.319			

Table 4.2 analyses show that in spite of an increase in the PDCs ratings from the VLEs' group to the NSs' group, a rating increase of 0.069, 95% CI [-0.279, 0.140], which was not statistically significant ( $p=.510$ ). In like manner, as to the DODCs, a rating increase from the VLEs' group to the NSs' group (0.264, 95% CI [-0.543, 0.016]) was not statistically significant ( $p=.064$ ). Hence, with respect to verbs of Type 1, the null hypotheses H1(i)<sub>o</sub> and H1(ii)<sub>o</sub> were not rejected. In this case, both groups delivered cognate performance on Type 1 structures.

By the same token, the outcome of H1(iii-iv)<sub>o</sub> test is presented in Table 4.3 below. It can be realised that the VLEs were found to rate Type 2 PDCs more than the NSs, with their ratings predicted to be approximately 0.010 more and 95% CI [-0.181, 0.202]. This was, however, not statistically significant ( $p=.914$ ). The null hypothesis H1(iii)<sub>o</sub> was thus not rejected. With respect to Type 2 DODCs, a rating decrease from the VLEs' group to the NSs' group (0.438, 95% CI [-0.770, -0.105]) was statistically significant ( $p=.011$ ). This led to rejection of the null hypothesis H1(iv)<sub>o</sub> in favour of H1(iii)<sub>E</sub>. The learners thus attained native-like grammar for the Type 2 PDCs, but they underperformed the Type 2 DODCs as compared with the NSs.



**Table 4.3***Between-Group Comparisons of Ratings for Type 2 Dative Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
PDCs				
Intercept	4.403	.000	4.267	4.538
VLEs	.010	.914	-.181	.202
Subject (variance)	.087			
Residual	.635			
DODCs				
Intercept	3.465	.000	3.230	3.700
VLEs	-.438	.011	-.770	-.105
Subject (variance)	.325			
Residual	1.396			

The next factor of interest is markedness, which is put forward in Hypothesis 2.

H2(i-ii)<sub>O</sub> : There is no difference in the VLEs' performance on the judgments between the PDCs and the DODCs within each verb type: Verb Type 1 and Verb Type 2.

H2(i-ii)<sub>E</sub>: For verbs of Types 1 and 2, the VLEs will rate the PDCs at higher levels of acceptability than the DODCs.

To examine H2(i-ii)<sub>O</sub>, the MLMs were employed to test the effect of *structure* on the acceptability ratings of Type 1. Consider Table 4.4.

**Table 4.4***Comparisons of Ratings between PDCs and DODCs*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Verb Type 1				
Intercept	3.819	.000	3.653	3.986
PDCs	.514	.000	.327	.701
Verb Type 2				
Intercept	3.028	.000	2.846	3.210
PDCs	1.385	.000	1.219	1.552

It can be seen from Table 4.4 that the PDCs were found to be rated significantly higher than the DODCs in both types of verbs, with their rating values predicted to be approximately 0.514 and 1.385 more, respectively. All effects were statistically significant ( $p=.000$ ). This indicates that the null hypothesis H2(i-ii)<sub>O</sub> was rejected in favour of H2(i-ii)<sub>E</sub>. Put differently, the learners had better performance on the PDCs than the DODCs within each verb type. The theory of markedness was thus supported.

I now move on to Hypothesis 3, which tests L1 transfer.

H3(i-iv)<sub>O</sub>: The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each dative structure: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.

H3(i-iv)<sub>E</sub>: For each dative structure, the VLEs' acceptability ratings in L1 will predict their ratings in L2: (i) Type 1 PDCs, (ii) Type 1 DODCs, (iii) Type 2 PDCs, and (iv) Type 2 DODCs.

In order to test H3(i-iv)<sub>O</sub>, four separate MLMs were developed with fixed effects for *structure* and *L1 rating* as predictor variables. *L2 rating* was the response variable; random effects for *item* and *subject* were included. The results for Type 1 sentences are shown in Table 4.5.

**Table 4.5**

*L1 Transfer across Dative Structures*

Source	Numerator df	Denominator df	F	Sig.
Type 1 PDCs				
Intercept	1	267.356	398.163	.000
L1 rating	4	277.454	1.007	.404
Type 1 DODCs				
Intercept	1	148.305	369.736	.000
L1 rating	4	280.174	.727	.574
Type 2 PDCs				
Intercept	1	123.672	1985.678	.000
L1 rating	4	279.976	2.953	.020
Type 2 DODCs				
Intercept	1	61.480	390.795	.000
L1 rating	4	276.655	.351	.844

In Table 4.5, there was no effect of L1 ratings on L2 ratings of the Type 1 PDCs ( $p=.404$ ) and Type 1 DODCs ( $p=.574$ ); hence, H3(i-ii)<sub>O</sub> was not rejected. Regarding Type 2 verbs, given that an effect of L1 rating was detected ( $p=.020$ ), H3(iii)<sub>O</sub> was rejected for Type 2 PDCs in favour of H3(iii)<sub>E</sub>. However, H3(iv)<sub>O</sub> was not rejected for Type 2 DODCs ( $p=.844$ ). These results mean that an influence of L1 ratings was detected for Type 2 PDCs.

The section now proceeds to Hypothesis 4, the last factor of this experiment.

H4<sub>o</sub>: There is no difference in the VLEs' performance on the judgments between Type 1 DODCs and Type 2 DODCs.

H4<sub>e</sub>: The VLEs will rate Type 1 DODCs at higher levels of acceptability than Type 2 DODCs.

The MLM was then conducted to compare the ratings of the DODCs between two verb types. The outcome is illustrated in Table 4.6.

**Table 4.6**

*Comparisons of DODC Ratings across Verb Types*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Intercept	3.028	.000	2.875	3.180
Type 1 DODCs	.792	.000	.576	1.007

The data analysis in Table 4.6 indicates that Type 1 DODCs had an effect ( $p=.000$ ), and was found to be rated statistically significantly more than that of Type 2, with their rating values predicted to be approximately 0.792 more. This reflects the fact that the VLEs had more correct responses of Type 1 DODCs than Type 2 DODCs. Seen in this light, Hypothesis 4 was not rejected.

Table 4.7 summarises outcomes of the null hypothesis testing in Experiment 1.

**Table 4.7***Results of Experiment 1 – List of Hypotheses Rejected (R), Not Rejected (NR)*

Areas	Hypothesis Notation	Null Hypotheses	Results
Native-like competence	H1(i) <sub>o</sub>	There is no difference between the VLEs' and NSs' performance on the judgments of each dative structure. (i) Type 1 PDCs	NR
	H1(ii) <sub>o</sub>	(ii) Type 1 DODCs	NR
	H1(iii) <sub>o</sub>	(iii) Type 2 PDCs	NR
	H1(iv) <sub>o</sub>	(iv) Type 2 DODCs	R
Markedness	H2(i) <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between the PDCs and the DODCs within each verb type. (i) Verb Type 1	R
	H2(ii) <sub>o</sub>	(ii) Verb Type 2	R
Transfer	H3(i) <sub>o</sub>	The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each dative structure (i) Type 1 PDCs	NR
	H3(ii) <sub>o</sub>	(ii) Type 1 DODCs	NR
	H3(iii) <sub>o</sub>	(iii) Type 2 PDCs	R
	H3(iv) <sub>o</sub>	(iv) Type 2 DODCs	NR
Morphological constraint	H4 <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between Type 1 DODCs and Type 2 DODCs.	R

**4.2.3 Discussion**

This section is concerned with the discussion on four results of hypotheses summarised in Table 4.7. Hypothesis 1 centres on the native-like competence. The MLM analyses demonstrate that the VLEs underperformed the NSs in respect of Type 2 DODCs. When it comes to Type 1 sentences, although learners' ratings were lower than those

of the NSs', these differences were not statistically significant ( $p > .05$ , see Table 4.2). Interestingly, the learners had more correct acceptability in Type 2 PDCs than the NSs. However, this was not also statistically significantly different. Taken all together, the learners had native-like competence for all dative structures, excluding Type 2 DODCs. It is important to note that although the learners were proved to have native-like grammar proficiency regarding licit DODCs, they still made wrong grammatical judgments on such structures. As such, 23.61% of the learners judged these structures ungrammatical (see Table 4.1). In other words, nearly a quarter of the learners did not think that verbs of Type 1 can be compatible with the DODCs. I can therefore conclude that the learners had incomplete acquisition of the DODCs for the dative verbs. Analogous to the experimental group, the native controls also experienced some trouble in rating the DODCs. However, here I only focused on learners' data as this is the objective of this study.

Let me turn to Hypothesis 2 which postulates markedness. As already realised from Table 4.1, a high percentage of the learners and native controls had correct judgments for the PDCs in both verb types. However, this rate decreased significantly for the DODCs. The analysis shows that the learners judged the unmarked PDCs more accurately than the marked DODCs in both verb types, and this was statistically different ( $p < 0.05$ , see Table 4.4). Hence, this finding lends support to the developmental sequence outlined in several previous studies that the PDCs were consistently acquired prior to the DODCs (e.g., Hawkins, 1987; Katsufuji, 2000; Mazurkewich, 1984; Marefat, 2005; Uğkun, 2015; Zara et al., 2013; Zeybek, 2018). This result was also in line with previous research (e.g., De Cuypere et al., 2014; Jäschke & Plag, 2016) that Russian and German learners had a bias towards the PDC in L2 English although the DODC is the more frequent pattern than the PDC in their L1s. Taken together, I predicate that markedness has an effect on shaping VLEs' acquisition of the DA. These findings also support the case assignment (Stowell, 1981) in that an NP receiving case must be adjacent to a governing verb or preposition. The learners thus may find it more difficult as they do not know how the recipient receives its case in relation to the DODCs.

More interestingly, the result of Type 2 structures particularly supports the research of Baten and De Cuypere (2014), who found that the DOCs were rated consistently higher in German than in Dutch by Dutch L1 learners of German. Recall that while both alternants occur in Dutch, German only allows default DOCs. In the

present study, the Vietnamese's acquisition of English DA appears to mirror the Dutch learners' acquisition of German dative. That is, while the DA occurs in Vietnamese, English only allows PDCs regarding the nonalternating verb class. Consequently, the PDCs were rated consistently higher than the DODCs in both L1 Vietnamese and L2 English (see Appendix T for the analysis of L1 data).

The discussion now comes to Hypothesis 3 where the transfer effect is tested. It has been stated that L2 learners normally make use of prior knowledge (this includes implicit and explicit knowledge of L1 and L2) to facilitate their task (Færch & Kasper, 1980; Ringbom, 1987). Theoretically, although transfer exerts bidirectional effects between L1 and L2 (Kecskes & Papp 2000), the one-way influence (from L1 to L2) is the focus of my study. Given that L1 transfer effects have an influence on how VLEs acquire the dative patterns across verbs of Types 1 and 2, one could expect that the Vietnamese learners were assumed to accept Type 1 sentences and Type 2 PDCs because of the positive transfer, and they would judge Type 2 DODC wrongly due to the negative evidence (Ringbom, 1987; VanPatten & Benati, 2015; VanPatten & Williams, 2015b). The analysis uncovers that L1 ratings were found to have the most effect (positive transfer) on Type 2 PDCs. However, this transfer was assumed to facilitate Type 1 structures as well, but with weaker effects. Although the learners committed errors in all structures, they had many more correct responses in the PDCs than the DODCs in both types of verbs. Learners' acquisition of the dative can be illuminated by Schachter's (1992) Transfer Hypothesis. For every correct answer, the learners arrived at the same domain and a correct hypothesis (outcome 2). However, they had a wrong hypothesis for the wrong answers. In light of this explanation, numerous learners had a correct hypothesis for verbs in the PDCs, but they formed a wrong hypothesis for verbs used in the DODCs (outcome 3) due to their mistaken analysis of the input. In this respect, there were only two verbs (i.e., *send*, *transport*), on which all learners had a correct hypothesis (see Appendix H).

The next theme is on Hypothesis 4, which speaks to the morphological constraint. The result confirms previous research in that the learners showed higher

accuracy in the licit DODCs in which most native verbs<sup>35</sup> were used (Agirre, 2015). I agree that the morphological constraint had an effect on the learners' acquisition of the DA. This result is not surprising since the learners attained the native-like competence for Type 1 DODC but not for Type 2 DODC. I assume that this constraint will be lost when the learners can perceive that an alternating dative verb must be a member of the native-stem class, and verbs of Latinate origin cannot be compatible with the DODC. This conforms to the previous studies which offer evidence that the foreign learners had more correct judgments in licit DODCs than illicit DODCs (e.g., Bley-Vroman & Yoshinaga, 1992; Mazurkewich, 1984). For example, NSs as well as French/ Inuktitut L1 learners of all levels in Mazurkewich (1984) failed to distinguish the DODCs in alternating and nonalternating verb classes. One possible account for this is that while English Type 1 DODCs have their counterparts in Vietnamese, this is not the case for Type 2 DODCs. In this scenario, the FT-FA Hypothesis (Schwartz & Sprouse, 1994; 1996) also supports this acquisition. However, in Type 2 DODCs, the negative transfer was supposed not to happen for all learners. In fact, only 43.40% of the learners obtained correct responses for Type 2 DODCs, leading to the fact that the positive evidence, to some extent, overrode the negative transfer.

Broadly speaking, understanding etymologies of dative verbs appears to go beyond the normal knowledge of EFL learners. One more feasible ground for this acquisition could come from the input-based explanation. In an EFL context, English is typically exposed to a limited time in schooling-bound settings as compared with the frequent use of L1 English in natural environment. This difference is sometimes compounded by EFL teachers' imperfect grammar lessons and quizzes (Bley-Vroman, 1990). Moreover, L2 learners' vocabulary repertoire is normally assumed to be smaller than that of NSs of a comparable educational level. Therefore, L2 learners sometimes overuse word forms that frequently occur in the texts (Ringbom, 2014), and VLEs' learning strategies normally rely on memorising grammatical rules (Hoang, 2017). This minimises their opportunities to bolster their communicative skills (Pham & Bui,

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<sup>35</sup> As stated in Chapter 2, verbs of Type 1 include a Latin verb *carry*. However, I still put this verb in Type 1 since it is classified as an alternating verb (Levin, 1993). The result shows that only 10 VLEs (27.78%) judged this verb grammatical in the DODC (i.e., *He carried the girls some toys*) (See Appendix H). It seems to me that both NSs and VLEs considered *carry* as a member of nonalternating verb classes. However, the low ratings of this verb indicate that the morphological constraint in this experiment is not violated regardless of the classification of this verb.



2019), resulting in the fact that some learned structures can be unaware or forgotten if these structures are not used regularly (Huynh, 2020).

Alternatively, the overgeneralisation can be considered as a cause for the morphological constraint. Recall that verbs of Type 1 and Type 2 were selected on a ground of synonyms. Hence, the learners tend to overgeneralise Type 1 structures to Type 2 structures due to verbs of similar semantics. Consider (4.1).

- (4.1)           a. He sent the teacher some messages.  
                  b. \*He submitted the director some proposals.

For instance, upon hearing (4.1a), the VLEs probably establish a grammatical rule in which *send* also appears in an unattested synonymous construction (4.1b), even if they have never seen this verb being used in this syntax before. This learnability problem arises since *send* and *submit* are synonymous with each other. The data on the argument-structure errors in (4.1b) reflected the fact that VLEs have overgeneralised *send* to *submit*. However, it should be noted that the overgeneralisations have been retreated in some cases, and knowledge-based familiarity with some verbs was blamed for this aspect.

#### 4.2.4 Conclusion

In Experiment 1, I have explored whether the VLEs acquired the DA regarding the native-like competence, markedness, L1 transfer, and the morphological constraint. Of various ranges of interpretations that have been drawn, no sole factor is attributed to learners' acquisition of dative structures. The findings have suggested that the VLEs attained the native-like grammar in respect to dative structures, excluding the illicit DODCs. The markedness theory was found to provide a plausible account for the learners' acquisition of the DA in which the DODCs lag behind the PDCs. This acquisitional sequence can also be explained by case assignment or Schachter's (1992) Transfer Hypothesis, that is, a majority of learners chose the right hypothesis for the PDCs, but the wrong hypothesis was formed for the DODCs. The morphological constraint is also recognised to have an effect on learners' achievement of the DODCs, and this is in accordance with the learners' input, FT-FA Hypothesis, and overgeneralisations.

### 4.3 Experiment 2

Experiment 2 consists of two types of benefactive verbs: eight alternating verbs (*build, buy, earn, gain, get, make, win, and write*) and eight PBC-only verbs (*collect, compose, construct, create, obtain, purchase, receive, and recover*). Each verb was tested in two structures, which made a total of 32 stimulus sentences in L2 English. The L1 Vietnamese learners also completed an L1 task which included all translated sentences from their counterparts in L2. In this experiment, the statistical procedure is similar to that of Experiment 1.

#### 4.3.1 Summaries of acceptability-rating data

All the stimulus sentences were judged with a five-point Likert scale. The summary of the pooled data in both groups is shown in Table 4.8.

**Table 4.8**

*Response of Benefactive by Percentage of Subjects*

Participant	Structure	Percentage of participants		
		unacceptable	neither unacceptable nor acceptable	acceptable
VLEs	L2 English			
	Type 1 PBCs	6.60	2.43	90.97
	Type 1 DOBCs	46.53	12.15	41.32
	Type 2 PBCs	10.07	8.68	81.25
	Type 2 DOBCs	24.65	17.36	57.99
	L1 Vietnamese			
	Type 1 PBCs	3.13	2.08	94.79
	Type 1 DOBCs	6.94	2.78	90.28
	Type 2 PBCs	3.47	1.39	95.14
	Type 2 DOBCs	7.99	4.51	87.50
NSs	Type 1 PBCs	9.03	10.07	80.90
	Type 1 DOBCs	23.61	13.89	62.50
	Type 2 PBCs	5.56	6.94	87.50
	Type 2 DOBCs	31.60	7.64	60.76

As can be observed in Table 4.8, the first point worth noticing is that the PBCs received much more correct acceptability than the DOBCs in both experimental and control groups. This trend also happened to L1 Vietnamese, but the differences between the PBCs and DOBCs in L1 were less clear-cut, and L1 DOBCs were rated much more than their counterparts in L2 English. Interestingly, regarding Type 1 PBCs, more learners had correct ratings than the NSs, accounting for 90.97% and 80.9%, respectively. By and large, the figure is broadly consistent with the acceptability of L1 Vietnamese in both verb types.

### 4.3.2 Testing hypotheses

In order to analyse the data associated with the hypotheses that are tested in this experiment, multiple MLMs have been conducted. The first hypothesis is concerned with the native-like performance.

H1(i-iv)<sub>O</sub>: There is no difference between the VLEs' and NSs' performance on the judgments of each benefactive structure: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.

H1(i-iv)<sub>E</sub>: The VLEs will rate the benefactive structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.

To test Hypothesis 1, four MLMs were carried out for the dataset of the two groups. Random effects were *participant*, and *L2 rating* was the dependent variable. Table 4.9 displays the results for Type 1 items.

In Table 4.9, the learners slightly obtained more correct responses than the native controls in terms of the PBCs. This judgment difference, however, was insignificant, with a rating decrease of 0.191, 95% CI [-0.015, 0.397],  $p=.069$ . Hence, H1(i)<sub>O</sub> was not rejected. In respect of the DOBCs, a rating increase from the VLEs' group to the NSs' group (0.802, 95% CI [-1.106, -0.498]) was statistically significant ( $p=.000$ ), indicating that H1(ii)<sub>O</sub> was rejected in favour of H1(ii)<sub>E</sub>. Table 4.9 thus gives evidence that the learners were target-like for Type 1 PBCs but the NSs outperformed the VLEs for Type 1 DOBCs.

**Table 4.9***Between-Group Comparisons of Ratings for Type 1 Benefactive Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
PBCs				
Intercept	4.247	.000	4.101	4.393
VLEs	.191	.069	-.015	.397
Subject (variance)	.089			
Residual	.834			
DOBCs				
Intercept	3.743	.000	3.528	3.958
VLEs	-.802	.000	-1.106	-.498
Subject (variance)	.226			
Residual	1.533			

Moving to cross-group comparisons regarding the nonalternating verb class, a similar statistical procedure was adopted, as shown in Table 4.10.

**Table 4.10***Between-Group Comparisons of Ratings for Type 2 Benefactive Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
PBCs				
Intercept	4.340	.000	4.177	4.504
VLEs	-.076	.512	-.307	.155
Subject (variance)	.137			
Residual	.836			
DOBCs				
Intercept	3.410	.000	3.209	3.611
VLEs	.118	.411	-.166	.402
Subject (variance)	.176			
Residual	1.521			

Table 4.10 delineated an increase of the PBCs ratings from VLEs' group to the NSs' group, with a rating increase of 0.076, 95% CI [-0.307, 0.155], which was not statistically significant ( $p=.512$ ). Similarly, for the DOBCs, a rating decrease from the VLEs' group to the NSs' group (0.118, 95% CI [-0.166, 0.402]) was not statistically significant ( $p=.411$ ). These results suggest that H1(iii)<sub>O</sub> and H1(iv)<sub>O</sub> were not rejected. Put it differently, the learners achieved the native-like grammar for Type 2 structures.

The section now turns to the second hypothesis, which investigated markedness.

H2(i-ii)<sub>O</sub>: There is no difference in the VLEs' performance on the judgments between the PBCs and the DOBCs within each verb type: Verb Type 1 and Verb Type 2.

H2(i-ii)<sub>E</sub>: The VLEs will rate the PBCs at higher levels of acceptability than the DOBCs within each verb type: Verb Type 1 and Verb Type 2.

My objective here is to test markedness in H2(i-ii)<sub>O</sub>. Table 4.11 summarises the results of both verb types acquired by the learners.

**Table 4.11**

*Effects of Structures on Ratings*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Type 1				
Intercept	2.941	.000	2.771	3.111
PBCs	1.497	.000	1.315	1.678
Type 2				
Intercept	3.528	.000	3.351	3.704
PBCs	0.736	.000	.556	.916

In Table 4.11, the PBCs were found to be rated significantly more than the DOBCs in both types of verbs, with their rating values predicted to be approximately 1.497 and

0.736 more, respectively. All effects were strongly significant,  $p=.000$ . Hence, H2(i)<sub>O</sub> and H2(ii)<sub>O</sub> were rejected in favour of H2(i)<sub>E</sub> and H2(ii)<sub>E</sub>, respectively. The learners, thus, obtained significantly higher correct responses in the PBCs than in the DOBCs in both verb types, and this supported the theory of markedness.

H3(i-iv)<sub>O</sub>: The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each benefactive structure: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.

H3(i-iv)<sub>E</sub>: VLEs' acceptability ratings in L1 will predict their ratings in L2: (i) Type 1 PBCs, (ii) Type 1 DOBCs, (iii) Type 2 PBCs, and (iv) Type 2 DOBCs.

H3<sub>O</sub> was to test whether learners' L1 ratings will predict L2 ratings within each structure. Therefore, I ran four MLMs, and the outcomes are illustrated in Table 4.12.

**Table 4.12**

*Effect of L1 Ratings on L2 Ratings*

Source	Numerator df	Denominator df	F	Sig.
Type 1 PBCs				
Intercept	1	159.759	1046.148	.000
L1 rating	3	273.218	.765	.515
Type 1 DOBCs				
Intercept	1	169.372	129.341	.000
L1 rating	4	271.793	2.301	.059
Type 2 PBCs				
Intercept	1	215.702	627.811	.000
L1 rating	3	253.896	3.058	.029
Type 2 DOBCs				
Intercept	1	98.904	305.474	.000
L1 rating	4	280.236	3.712	.006

In Table 4.12, there was no effect of L1 ratings on L2 ratings with reference to PBCs ( $p=.515$ ) and DOBCs ( $p=.059$ ) of Type 1. Given that no effect of either kind is evident, I conclude that H3(i)<sub>O</sub> and H3(ii)<sub>O</sub> were not rejected. Regarding Type 2 structures, L1 ratings had significant effects on the learners' responses in the PBCs ( $p=.029$ ) and the DOBCs ( $p=.006$ ). In this case, the null hypotheses H3(iii)<sub>O</sub> and H3(iv)<sub>O</sub> were rejected in favour of the experimental hypotheses H3(iii)<sub>E</sub> and H3(iv)<sub>E</sub>, respectively.

H4<sub>O</sub>: There is no difference in the VLEs' performance on the judgments between Type 1 DOBCs and Type 2 DOBCs.

H4<sub>E</sub>: VLEs will rate Type 1 DOBCs at higher levels of acceptability than Type 2 DOBCs.

Hypothesis 4 tests the morphological constraint. In this test, learners' sensitivity to DOBCs was measured by comparing ratings of the DOBCs of two types of verbs, as shown in Table 4.13.

**Table 4.13**

*Comparisons of DOBCs across Verb Types*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Intercept	3.528	.000	3.378	3.677
Type 1 DOBCs	-.587	.000	-.798	-.375

Table 4.13 indicates that Type 1 DOBCs were rated less than their counterparts in Type 2, with their rating values predicted to be approximately 0.587 less. This difference was statistically significant ( $p=.000$ ). This means that VLEs had less correct acceptability of the DOBCs of Type 1 than that of Type 2. Hence, the null hypothesis H4<sub>O</sub> and the experimental hypothesis H4<sub>E</sub> were both rejected.

I now move to asymmetric treatment of dative and benefactive structures, as restated in Hypotheses 5 and 6.

H5(i-ii)<sub>O</sub>: There is no difference in the VLEs' performance on the judgments between the PDCs and the PBCs within each verb type: (i) Verb Type 1 and (ii) Verb Type 2.

H5(i-ii)<sub>E</sub>: The VLEs will rate the PDCs at higher levels of acceptability than the PBCs: (i) Verb Type 1 and (ii) Verb Type 2.

H6(i-ii)<sub>O</sub>: There is no difference in the VLEs' performance on the judgments between the DODCs and the DOBCs within each verb type: (i) Verb Type 1 and (ii) Verb Type 2.

H6(i-ii)<sub>E</sub>: The VLEs will rate the DODCs at higher levels of acceptability than the DOBCs: (i) Verb Type 1 and (ii) Verb Type 2.

To test Hypotheses 5 and 6, each dative variant was compared with its benefactive counterpart, as in Table 4.14.

In Table 4.14, there was an increase of ratings from the PDCs to the PBCs in Type 1, but an opposite direction was found for Type 2 structures. These differences, however, were insignificant for  $p=.171$  and  $p=.057$ , respectively. Hence, the null hypotheses H5(i)<sub>O</sub> and H5(ii)<sub>O</sub> were not rejected. As for the DOCs, a rating decrease from the DODCs to the DOBCs was recognised for verbs of Type 1, but a converse direction for verbs of Type 2. Both rating differences were strongly significant ( $p=.000$ ). This led to rejection of the null hypotheses H6(i)<sub>O</sub> and H6(ii)<sub>O</sub> in favour of the experimental hypotheses H6(i)<sub>E</sub> and H6(ii)<sub>E</sub>, respectively. Overall, the learners had similar performance regarding the PDCs and the PBCs in both types of verbs. However, they had more correct responses for the DODCs than the DOBCs of Type 1 (native origin), but less correct responses for the DODCs than the DOBCs regarding verbs of Type 2 (Linate origin).



**Table 4.14***Dative-Benefactive Comparisons*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Type 1				
Intercept	4.438	.000	4.298	4.577
PDCs	-.104	.171	-.253	.045
Intercept	2.941	.000	2.712	3.169
DODCs	.878	.000	0.674	1.083
Type 2				
Intercept	4.264	.000	4.117	4.411
PDCs	.149	.057	-.005	.303
Intercept	3.528	.000	3.289	3.766
DODCs	-.500	.000	-.682	-.318

Based on the data analysis, Table 4.15 summarises the outcomes of the null hypotheses in this experiment as follows.

**Table 4.15***Results of Experiment 2 – List of Null Hypotheses Rejected (R), Not Rejected (NR)*

Areas	Hypothesis Notation	Null Hypotheses	Outcomes
Native-like competence	H1(i) <sub>o</sub>	There is no difference between the VLEs' and NSs' performance on the judgments of each benefactive structure.	NR
		(i) Type 1 PBCs	
	H1(ii) <sub>o</sub>	(ii) Type 1 DOBCs	R
	H1(iii) <sub>o</sub>	(iii) Type 2 PBCs	NR
	H1(iv) <sub>o</sub>	(iv) Type 2 DOBCs	NR

Areas	Hypothesis Notation	Null Hypotheses	Outcomes
Markedness	H2(i) <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between the PBCs and the DOBCs within each verb type. (i) Verb Type 1	R
	H2(ii) <sub>o</sub>	(ii) Verb Type 2	R
Transfer	H3(i) <sub>o</sub>	The VLEs' acceptability ratings in L1 have no effect on their ratings in L2 within each benefactive structure. (i) Type 1 PBCs	NR
	H3(ii) <sub>o</sub>	(ii) Type 1 DOBCs	NR
	H3(iii) <sub>o</sub>	(iii) Type 2 PBCs	R
	H3(iv) <sub>o</sub>	(iv) Type 2 DOBCs	R
Morphological constraint	H4 <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between Type 1 DOBCs and Type 2 DOBCs.	R
PDC-PBC comparisons	H5(i) <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between the PDCs and the PBCs within each verb type. (i) Verb Type 1	NR
	H5(ii) <sub>o</sub>	(ii) Verb Type 2.	NR
DODC-DOBC comparisons	H6(i) <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between the DODCs and the DOBCs within each verb type. (i) Verb Type 1	R
	H6(ii) <sub>o</sub>	(ii) Verb Type 2.	R

### 4.3.3 Discussion

In this section, I tested six hypotheses related to the acquisition of the BA in L2 English.

The first hypothesis was concerned with learners' native-like performance. I

tested the learners' performance of each benefactive variant by comparison with the NSs. The findings reveal that the learners attained near target-like acquisition of almost benefactive structures, excluding Type 1 DOBCs. However, it must be noted that although the VLEs attained native-like accuracy for Type 2-DOBCs, 24.65% of them still obtained incorrect acceptability, and up to 17.36% were dubious about their decision (See Table 4.8). Regarding Type 1 DOBCs, nearly half number of the learners (46.53%) could not get correct answers for these structures. In other words, most of them think that verbs of Type 1 cannot occur in the DOBCs. Overall, while the VLEs, generally, had no difficulties in judging benefactive verbs in the PBCs, there were still numerous obstacles for them to fully acquire the DOBCs.

I now move to Hypothesis 2 where markedness was tested. Like Experiment 1, the results show that markedness did have a significant effect in response to each verb type, in that the PBCs were consistently rated higher than the DOBCs ( $p < 0.05$ , see Table 4.11). The control and experimental groups demonstrated very few difficulties in rating the PDCs in both verb classes. For instance, 90.97% and 81.25% of the learners gave correct judgments on the PDCs in Types 1 and 2, respectively. This result anew bore out the developmental sequence outlined in the previous literature (e.g., Agirre, 2015; Cuervo, 2003; Hawkins, 1987; Mazurkewich, 1984, 1985; Uçkun, 2015; Zeybek, 2018) which claimed that markedness had an impact on the acquisition of the BA, and that the PBCs were acquired prior to the DOBCs. This acquisitional order is due to the distribution of the BA in the two languages. Syntactically, Vietnamese also has the PBCs and the DOBCs. However, the DOBCs only exist with the presence of the preposition *cho* 'for'. Hence, the outcome refers to the claim that the positive transfer happened to the PDCs and the negative transfer blocked the learners' acquisition of the DOBCs, which I relate to the FT-FA Hypothesis (Schwartz & Sprouse, 1996) or the case assignment (Stowell, 1981).

Shifting to Hypothesis 3, which tested the transfer, the results obtained were varied between Types 1 and 2. While no compelling evidence was present for an effect of transfer for Type 1 sentences, there was a significant effect of transfer for each structure of Type 2. In this way, L1 ratings were found to have a positive transfer on acquisition of Type 2 structures. Type 1 structures were supposed to undergo the transfer but with weaker effects. In consideration of Schachter's (1992) Transfer Hypothesis, most of the learners formulated a correct hypothesis for verbs used in the PBCs. By contrast, they still had the same domain but arrived at a wrong hypothesis

for verbs used in the DOBCs. In this study, three verbs (*buy, compose, make*) received a correct hypothesis from all learners (See Appendix L).

Hypothesis 4 examined whether VLEs were sensitive to the morphological constraint. Unlike Experiment 1, the data analysis in Experiment 2 portrayed an opposite tendency where the learners had more difficulties in accepting Type 1 DOBCs than Type 2 DOBCs. In other words, they were not sensitive to two different types of benefactive verbs which were used in varied syntactic realisation. In this case, the role of the morphological condition did not have a strong effect on the acquisition of the BA as it did on the acquisition of the DA. Findings in this study received mixed supports from previous studies. That is evidence was found in Mazurkewich's (1984) study in that French L1 speakers of intermediate and advanced levels had more correct acceptability of illicit PBCs than licit PBCs. In contrast, the result of this hypothesis rejected the Inuit group's data (Mazurkewich, 1984) and Agirre's (2015) study. The result can be interpreted in such a way that the learners were not ready to acquire the benefactive NRR which defines specific classes of benefactive verbs occurring in a specific construction. In fact, the NRRs were greatly difficult in the adult lexicon (Naigles, 1991). The evidence in the literature predicated that the learners did not acquire specific verb semantics. Advanced Japanese speakers in Inagaki's (1997) study, for example, could not distinguish *throw*-verb classes from *push*-verb classes even though the two languages share structural similarities. In this study, verbs of obtaining (e.g., *earn, gain, win*) or verbs of creation (e.g., *build, make*) accept two benefactive variants but only a few learners judged these verbs to be grammatical in the DOBCs. Specifically, only nine learners (25%) thought that verbs like *earn* and *gain* were grammatical in the DOBCs (i.e., *He earned the owner some contracts* or *She gained the farmers some benefits*) (See Appendix M).

Together with the overgeneralisation effects, these findings were also attributed to this outcome. For example, the learners may have overgeneralised *recover* to *win* as in (4.2) in which 58.34% of the learners had accurate acceptability for (4.2a), and 72.22% of the learners had errors for (4.2b) (See Appendix M).

- (4.2) a. \*She recovered the accountant a debt.  
b. She won the child a prize.

The transfer-based account is also contributed to the outcome of the morphological

condition. Based on cross-linguistic differences of the DOBCs between two languages due to the presence of the preposition *cho* in L1 DOBCs, the learners were supposed to reject licit and illicit DOBCs due to negative and positive transfer, respectively. This helped explain why the accurate acceptability in Type 1 DOBCs was lower than that in Type 2 DOBCs. However, the results of this experiment at the learners' individual level have suggested that many learners (43.32%) could have overridden the negative effects of L1 transfer, and that semantics of DODCs was overgeneralised to DOBCs (Oh, 2010).

In Hypothesis 5, I explored whether there were asymmetries of the PDCs and PBCs in Experiments 1 and 2. Following UG-based markedness, the PDCs or PBCs are unmarked forms. The results reveal that the PDCs were generally rated as high as PBCs in both groups. Put differently, the learners did not have difficulty in acquiring the prepositional structures in two experiments as they attained the target-like competence for these structures. On this point, this result lends supports to previous studies (Oh and Zubizarreta, 2005; Sawyer, 1995).

Hypothesis 6 tested the asymmetric treatment of the DOCs in the DA and the BA. The results did not reject this hypothesis, in that the licit DOBCs were rejected more strongly than the licit DODCs, and the illicit DODCs were rejected more than the illicit DOBCs. The semantic properties of L2 sentences can be used to explain H6iE. In terms of semantics of DOCs, Pinker (2013) argues that DODCs were normally attached with possession-change scenarios, however this effect was significantly weaker for DOBCs (p. 134). It is thus that the learners had a preference for the DODCs over the DOBCs due to the possession constraint. However, for H6iiE, this account is insufficient for verbs of Type 2 where the DOBCs were rated higher than their counterparts in Experiment 2.

Another alternative to explain this is the distribution of DODCs and DOBCs in the two languages. Regarding verbs of Type 1, the positive transfer exists for the DODCs, and the negative transfer is for the DOBCs due to the existence of the preposition *cho*. This is because the prepositions (*cho* 'for' and *đến* 'to') embedded in the DODCs are optional, and they were not supposed to have a negative effect as the mandatory preposition *cho* in the DOBCs. In this regard, Vietnamese DOBCs seems to be more restrictive than DODCs. However, this tendency is reversed for illicit DOCs. That is, the negative transfer exists for the DODCs, but the positive transfer happens to the DOBCs. Overall, the preposition *cho* did play an effect on the

acquisition of the DOBCs. In this respect, these results lend the support to the FT-FA hypothesis. The acquisition of the DOCs lends the support to previous studies (Hawkins, 1987; Oh, 2010; Oh, & Zubizarreta, 2005) that the DODC is unmarked and the DOBC is marked since the learners were more accurate to dative verbs than benefactive verbs in Type 1. However, this was not correct for Type 2 sentences where the illicit DOBCs obtained more correct responses than their counterparts in the dative. For example, In Oh and Zubizarreta's (2005) research, Japanese and Korean learners had stronger rejection of the DOBCs due to benefactive verbal morphology *ageru*- and *cwu*- in their L1s, correspondingly.

#### 4.3.4 Conclusion

Experiment 2 tested whether the VLEs acquire the BA in terms of the native-like competence, morphological constraint, markedness, L1 transfer, and its asymmetries to the DA. The results provide empirical evidence that the VLEs attained the native-like grammar in respect to most benefactive structures, excluding the licit DOBCs. Besides this, markedness and L1 transfer had an influence on their performance. Additionally, L1 ratings were found to have a significant influence on Type 2 structures. The FT-FA Hypothesis, the Transfer Hypothesis, and case assignment were claimed to interpretations of a preference of the PDCs over the DODCs. Besides this, the morphological constraint was explained by NRRs, the learners' input, FT-FA Hypothesis and overgeneralisations. While the asymmetries of the PDCs and PBCs can be proved by the positive transfer, the asymmetries of the DODCs and DOBCs were due to the preposition transfer and semantic features.

#### 4.4 Experiment 3

This experiment examined three types of verbs without any Vietnamese sentences. It employed 24 sets of two sentences, which conveyed the same event through an alternating and a nonalternating structure. Twenty-four target verbs were categorised into three types: eight alternating verbs (*brush, load, hang, pack, plant, spray, spread, wrap*), eight figure verbs (*arrange, drip, install, lay, lift, pour, put, spill*), and eight ground verbs (*contaminate, cover, decorate, fill, flood, pollute, soak, surround*). Type 1 sentences are all grammatical, while only Type 2 FOCs and Type 3 GOCs are grammatical,

#### 4.4.1 Summaries of acceptability-rating data

A summary of the data collected from Experiment 3 is provided in Table 4.16. Response codes of Type 2 GOCs and Type 3 FOCs have been reversed so that the option “acceptable” refers to the accurate responses across verb types.

**Table 4.16**

*Response of Locatives by Percentage of Subjects*

Participant	Structure	Percentage of participants		
		unacceptable	neither unacceptable nor acceptable	acceptable
VLEs	Type 1 FOCs	6.95	4.51	88.54
	Type 1 GOCs	27.08	11.11	61.81
	Type 2 FOCs	7.29	2.43	90.28
	Type 2 GOCs	37.85	10.41	51.74
	Type 3 FOCs	55.90	13.54	30.56
	Type 3 GOCs	8.33	6.95	84.72
NSs	Type 1 FOCs	1.74	2.43	95.83
	Type 1 GOCs	20.83	6.25	72.92
	Type 2 FOCs	3.13	3.47	93.40
	Type 2 GOCs	13.89	7.99	78.12
	Type 3 FOCs	19.44	11.12	69.44
	Type 3 GOCs	8.68	7.29	84.03

Table 4.16 depicts the percentage of participants by acceptability across structures. The most striking data feature is a high proportion of participants in both groups that obtained accurate responses regarding alternators and figure verbs used in the FOCs, and ground verbs used in the GOCs. Conversely, a majority of the learners had incorrect responses for figure verbs and ground verbs used in the GOCs and the FOCs, respectively. Put differently, most of them had misjudgements that ground verbs can appear in the FOCs, and figure verbs can appear in the GOCs.

#### 4.4.2 Testing hypotheses

In this experiment, I test three Hypotheses relating to native like competence, L1

transfer, and structural condition as proposed in Table 3.13. I will begin by focusing on Hypothesis 1 for Verb Type 1.

#### a. Verb Type 1

H1(i-ii)<sub>O</sub>: There is no difference between the VLEs' and NSs' performance on the judgments of Type 1 structures: (i) Type 1 FOCs and (ii) Type 1 GOCs.

H1(i-ii)<sub>E</sub>: The VLEs will rate the locative structures in L2 at lower levels of acceptability than the NSs: (i) Type 1 FOCs and (ii) Type 1 GOCs.

In order to test this hypothesis, the cross-group multiple comparisons using the MLMs were conducted to compare the two groups' ratings within each structure. The fix effect was *group*, and *item* was the random effect. *Rating* was the dependent variable. The results of between-group comparisons for verbs of Type 1 are presented in Table 4.17.

**Table 4.17**

*Between-Group Comparisons of Ratings for Type 1 Locative Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
FOCs				
Intercept	4.573	.000	4.436	4.710
VLEs	-.285	.004	-.478	-.092
Subject (variance)	.101			
Residual	.542			
GOCs				
Intercept	3.875	.000	3.711	4.039
VLEs	-.372	.002	-.604	-.139
Subject (variance)	.050			
Residual	1.553			



In Table 4.17, the data pooling across groups proves that the learners had fewer correct judgments on both locative variants of Type 1 as compared with the NSs, and the main effects of *group* in both structures were statistically significant in the estimates of fixed effects. More specifically, there was an increase in the FOCs ratings from experimental group to the control group, a rating increase of 0.285, 95% *CI* [-0.478, -0.092], which was statistically significant ( $p=.004$ ). This led to rejection of the null hypothesis H1(i)<sub>O</sub> in favour of the experimental hypothesis H1(i)<sub>E</sub>. Similarly, in respect of the GOCs, a rating increase from the VLEs' group to the NSs' group (0.372, 95% *CI* [-0.604, -0.139]) was statistically significant ( $p=.002$ ). In this case, the null hypothesis H1(ii)<sub>O</sub> was rejected in favour of the experimental hypothesis H1(ii)<sub>E</sub>. On this account, the learners did not get the native-like competence regarding the alternating class.

## **b. Verb Type 2**

I now move to Type 2 sentences. Hypothesis 1 for this verb type is restated as follows.

H1(iii-iv)<sub>O</sub>: There is no difference between the VLEs' and NSs' performance on the judgments of Type 2 structures: (iii) Type 2 FOCs and (iv) Type 2 GOCs.

H1(iii-iv)<sub>E</sub>: The VLEs will rate the locative structures in L2 at lower levels of acceptability than the NSs: (iii) Type 2 FOCs and (iv) Type 2 GOCs.

A similar setup for the MLMs was carried out. Consider the outcome in Table 4.18. What Table 4.18 shows is that the learners had more errors on Type 2 structures as compared with the NSs. However, the main effect in each structure was not similar each other. In the FOCs, there was an increase of ratings from the VLEs' group to the NSs' group, a rating increase of 0.149, 95% *CI* [-0.335, 0.036], which was not statistically significant ( $p=.113$ ). Thus, H1(iii)<sub>O</sub> was not rejected. In respect to Type 2 GOCs, the learners had less correct responses than the NSs, a rating increase of 0.806, 95% *CI* [-1.050, -0.561]), and this was statistically significant ( $p=.000$ ). Hence, H1(iv)<sub>O</sub> was rejected in support of H1(iv)<sub>E</sub>. For verbs of Type 2, the learners were found to achieve the native-like competence regarding the FOCs, but they underperformed the GOCs as compared with the native controls.

**Table 4.18***Between-Group Comparisons of Ratings for Type 2 Locative Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
FOCs				
Intercept	4.510	.000	4.379	4.642
VLEs	-.149	.113	-.335	.036
Subject (variance)	0.081			
Residual	0.597			
GOCs				
Intercept	4.045	.000	3.872	4.218
VLEs	-.806	.000	-1.050	-.561
Subject (variance)	.096			
Residual	1.395			

**c. Verb Type 3**

I am now comparing the performance of two groups regarding the ground verbs. Hypothesis 1 for this verb type is recapped as follows.

H1(v-vi)<sub>O</sub>: There is no difference between the VLEs' and NSs' performance on the judgments of Type 3 structures: (v) Type 3 FOCs and (vi) Type 3 GOCs.

H1(v-vi)<sub>E</sub>: The VLEs will rate the locative structures in L2 at lower levels of acceptability than the NSs: (v) Type 3 FOCs and (vi) Type 3 GOCs.

The findings related to H1(v-vi)<sub>O</sub> are delineated in Table 4.19.

**Table 4.19***Between-Group Comparisons of Ratings for Type 3 Locative Structures*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
FOCs				
Intercept	3.799	.000	3.585	4.012
VLEs	-1.167	.000	-1.469	-.865
Subject (variance)	.254			
Residual	1.270			
GOCs				
Intercept	4.222	.000	4.062	4.382
VLEs	.000	1.000	-.227	.227
Subject (variance)	.130			
Residual	.816			

As can be observed in Table 4.19, the VLEs obtained less correct responses than the NSs for the FOCs, a rating contrast of 1.167, 95% CI [-1.469, -0.865], and this was statistically significant ( $p=.000$ ).  $H1(v)_O$  was rejected in favour of  $H1(v)_E$ . For Type 3 GOCs, it was interesting to realise that the learners' ratings were almost the same as those of the NSs (rating difference of 0.000, 95% CI [-0.227, 0.227]), and this was not statistically significant ( $p=1.000$ ).  $H1(vi)_O$  was thus not rejected. The learners then had the native-like grammar for the GOCs, but their performance on the judgments of the FOCs was lower compared with the NSs.

I now move on to hypothesis 2 which tested whether the learners were able to distinguish between the FOCs and the GOCs within each verb type.

$H2(i-iii)_O$ : There is no difference in the VLEs' performance on the judgments between the FOCs and the GOCs within each verb type: (i) Verb Type 1, (ii) Verb Type 2 and (iii) Verb Type 3.

$H2(i)_E$ : For Verb Type 1, the VLEs will rate the FOCs at higher levels of acceptability than the GOCs.

H2(ii)<sub>E</sub>: For Verb Type 2, the VLEs will rate the FOCs at higher levels of acceptability than the GOCs.

H2(iii)<sub>E</sub>: For Verb Type 1, VLEs will rate the GOCs at higher levels of acceptability than the FOCs.

In the model used to test H2(i-iii)<sub>O</sub>, I included fixed effects for *Structure* and *Rating* was categorised as the dependent variable. The comparisons were made within each verb type as presented in Table 4.20.

**Table 4.20**

*Comparisons of Learners' Ratings between FOCs and GOCs for Each Verb Type*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Verb Type 1				
Intercept	3.503	.000	3.357	3.650
FOCs	.785	.000	.605	.964
Verb Type 2				
Intercept	3.240	.000	3.091	3.388
FOCs	1.122	.000	.941	1.302
Verb Type 3				
Intercept	4.222	.000	4.061	4.383
FOCs	-1.590	.000	-1.771	-1.409

Table 4.20 analyses reveal that the VLEs' performance on the FOCs differed substantially from that on the GOCs. In detail, the FOCs were found to be rated significantly more than the GOCs by VLEs in verb types 1 and 2, with the rating predicted to be approximately 0.785 and 1.122 more, respectively. Regarding Verb Type 3, the GOCs was rated to be approximately 1.590 more. These rating differences

were all statistically significantly different ( $p=.000$ ). This led to rejection of the null hypotheses  $H(i-iii)_{2o}$  ( $p\leq .05$ ) in favour of the experimental hypotheses  $H(i-iii)_{2E}$ . These findings suggest that the learners were more accurate in the FOCs than the GOCs regarding alternating and figure verb classes. However, for the ground verb class, they showed higher accuracy in the GOCs than the FOCs. Overall, the learners could not figure out the syntactic mapping for each verb class.

H3<sub>o</sub>: There is no difference in the VLEs' performance on the judgments across verb types.

H3<sub>E</sub>: There is a difference in the VLEs' performance on the judgments across verb types.

To test this hypothesis, I need to determine whether the learners can distinguish the verbs classes by comparing the FOCs and the GOCs in each class with their counterparts in other class. First, the comparisons of the FOCs' ratings are shown in Table 4.21.

**Table 4.21**

*Comparisons of Learners' Ratings of FOCs across Verb Types*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Verb Types 1 and 2				
Intercept	4.361	.000	4.254	4.469
Type 1 FOCs	-.073	.347	-.225	.079
Verb Types 1 and 3				
Intercept	2.632	.000	2.501	2.762
Type 1 FOCs	1.656	.000	1.472	1.841
Verb Types 2 and 3				
Intercept	2.632	.000	2.502	2.762
Type 2 FOCs	1.729	.000	1.546	1.912

As can be seen in Table 4.21, no statistically significant difference in the learners' performance was found between Type 1 FOCs and Type 2 FOCs. That is, the FOCs of Type 1 were rated less than that of Type 2, with 0.073 rating less ( $p=0.347$ ).  $H_{30}$  was then not rejected. However, in the case of Verb Types 1 and 3 or Verb Types 2 and 3, the FOCs were rated significantly higher than the GOCs, with the rating predicted to be approximately 1.656 and 1.729 more, respectively. This led to rejection of the null hypothesis  $H_{30}$  in favour of  $H_{3E}$  ( $p=.000$  for both comparisons). The hierarchical ratings of FOCs across verb types are as follows: Type 2 FOCs  $\rightarrow$  Type 1 FOCs  $\rightarrow$  Type 3 FOCs.

In the same manner, the comparisons of the GOCs' ratings across three types of verbs are shown in Table 4.22.

**Table 4.22**

*Comparisons of the Learners' Ratings of GOCs across Verb Types*

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Verb Types 1 and 2				
Intercept	3.240	.000	3.091	3.388
Type 1 GOCs	.264	.014	.054	.474
Verb Types 1 and 3				
Intercept	4.222	.000	4.092	4.353
Type 1 GOCs	-.719	.000	-.904	-.534
Verb Types 2 and 3				
Intercept	4.222	.000	4.090	4.355
Type 2 GOCs	-.983	.000	-1.170	-.795

In Table 4.22, the learners' performance on the GOCs was compared across verb classes. The results convey that the VLEs did have different performance on the GOCs amongst the three verb classes. The GOCs of Type 1 was found to be rated more than the GOCs of Type 2, with the rating predicted to be approximately 0.264 more, and this difference was significant ( $p=.014$ ). Similarly, the GOCs of verb types 1 and 2 were rated less than those of Verb Type 3, with the rating predicted to be

approximately 0.719 and 0.983 less, respectively. These differences were statistically significant ( $p=.000$  for both comparisons). All of these results led to rejection of the null hypothesis  $H_{30}$  in favour of  $H_{3E}$ . The hierarchical ratings of GOCs across verb types are as follows: Type 3 GOCs  $\rightarrow$  Type 1 GOCs  $\rightarrow$  Type 2 GOCs. The findings obtained from Tables 4.21 and 4.22 provide the evidence that the learners could only distinguish the alternating verbs and figure verbs used in the FOCs. For the other cases, they failed to discern the difference in the usage of locative verbs. Put differently, they could not distinguish three classes of verbs which are attached with different syntactic realisation. In other words, the learners were still in the middle of acquisition of the locative structures.

Table 4.23 below summarises the results of null hypotheses testing in Experiment 3.

**Table 4.23**

*Results of Experiment 3 – List of Null Hypotheses Rejected (J), Not Rejected (NR)*

Areas	Hypothesis Notation	Null Hypotheses	Outcomes
Native-like competence	H1(i) <sub>o</sub>	There is no difference between VLEs' and NSs' performance on the judgments of each locative structure: (i) Type 1 FOCs	R
	H1(ii) <sub>o</sub>	(ii) Type 1 GOCs	R
	H1(iii) <sub>o</sub>	(iii) Type 2 FOCs	NR
	H1(iv) <sub>o</sub>	(iv) Type 2 GOCs	R
	H1(v) <sub>o</sub>	(iv) Type 3 FOCs	R
	H1(vi) <sub>o</sub>	(vi) Type 3 GOCs	NR
FOC-GOC comparisons	H2(i) <sub>o</sub>	There is no difference in the VLEs' performance on the judgments between the FOCs and the GOCs within each verb type: (i) Verb Type 1	R
	H2(ii) <sub>o</sub>	(ii) Verb Type 2	R
	H2(iii) <sub>o</sub>	(iii) Verb Type 3	R
Comparisons of Verb Types	H3 <sub>o</sub>	There is no difference in the VLEs' performance on the judgments across verb types.	R

#### 4.4.3 Discussion

Let me turn to discussion of three specific hypotheses. Hypothesis 1 was concerned with comparisons between VLEs' and NSs' performance on acceptability ratings of three types of locative verbs. Following this, the learners' performance was expected to be similar to the NSs' in terms of Type 1 FOCs, Type 2 structures, and Type 3 GOCs based on positive language transfer, and they produce more errors in other structures due to negative transfer. The outcomes in Tables 4.17 to 4.19 indicate that the performance of two groups were inconsistent across verb classes. The learners' native-like performance was only recognised in Type 2 FOCs and Type 3 GOCs as no significant rating differences were seen in the judgments between the two groups for these structures. For the other structures (i.e., Type 1 structures, Type 2 GOCs, and Type 3 FOC), the NSs had more correct acceptability ratings than VLEs. Otherwise speaking, the learners can only produce figure verbs and ground verbs employed in the licit FOCs and the licit GOCs, respectively, without difficulties. These results thus partly support the findings from Bullock (2004) in that Korean learners had similar native-like performance on all locative structures. In particular, the learners could not recognise not only two possible variants of Type 1 but also the licit and illicit variants of Types 2 and 3, and these results are corroborated by findings in Yakhabi et al. (2018). I thus conclude that the learners were still in the middle of developmental process of acquisition of the LA.

With regard to null Hypothesis 2 (H2<sub>0</sub>), the data analyses suggest that the VLEs' performance on the FOCs differed significantly from that on the GOCs within each verb type. Specifically, the VLEs rated the FOCs higher than the GOCs in reference to verbs of Types 1 and 2. By contrast, they had higher judgments for the GOCs than the FOCs regarding verbs of Type 3. These results were particularly in line with the data of the advanced learners in the literature (Bullock, 2004; Juffs, 1996b; Yakhabi et al., 2018). I assume that the FOCs formed with alternating and figure classes seemed to be less marked than the GOCs. By contrast, the FOCs were more marked than the GOCs regarding ground verbs (Yakhabi et al., 2018). Another plausible account for this comes from the language transfer. In Section 2.5.6 and in Table 3.12, I have shown that locative structures differ in terms of the NRRs in the two languages. For example, some English alternating verbs (*brush*, *pack*, *spread*, or



*wrap*) still alternate in Vietnamese, whilst some others (*hang, load, plant, or spray*) are only compatible with the FOCs in Vietnamese. Additionally, English figure verbs (*install*) and English ground verbs (*cover, decorate, fill, soak, surround*) can occur in two locative variants in Vietnamese. Overall, we only experienced the syntactic congruence for the FOCs in Types 1 and 2, and the GOCs in Type 3 between the two languages. I therefore assumed that the positive transfer facilitated the learners' acquisition regarding these structures. Looking into the details, in Appendices P and Q, some alternating and figure verbs (i.e., *hang, plant, or install*) received many wrong responses in the GOCs. Similarly, the learners also had misjudgements for some ground verbs (*cover, decorate, or fill*) in the FOCs. This negative transfer partly attributed to the learners' lower ratings of the GOCs in Verb Types 1 and 2, and the FOCs in Verb Type 3. Otherwise stated, the learners transferred their L1 grammar knowledge of the locative structures to English. These findings also provide evidence in favour of the FT-FA Hypothesis (Schwartz & Sprouse, 1996). These explanations of transfer could also be used to support Hypothesis 1 in which the learners had native-like competence for Type 2 FOCs and Type 3 GOCs.

In terms of Transfer Hypothesis (Schachter, 1983), a majority of the learners were supposed to arrive at correct domain and correct hypothesis (outcome 2) for positive transfer, but wrong hypothesis for the error transfer (outcome 3). Overall, the research demonstrates that the learners have benefited from the similarities between the two languages. Conversely, the cross-linguistic dissimilarity has interfered, to some extent, in their performance.

In Table 4.24, following Transfer Hypothesis (Schachter, 1983), it is important to note that most listed verbs would receive both correct and wrong hypothesis since both wrong and correct answers were identified for each verb. Therefore, these verbs were selected on the basis of a majority of the learners having correct hypothesis (positive transfer), or a few learners having correct hypothesis (negative transfer). Amongst them, only three verbs (i.e., *plant, put, and decorate*) received 100% correct answers, indicating that all learners arrived at the correct hypothesis for these verbs.

**Table 4.24***Transfer effects of Locative Verbs*

Transfer	Verb Type	FOCs	GOCs
Positive transfer	Verb Type 1	brush, hang, load, pack, plant, spray, spread, wrap	brush, pack, spread, wrap
	Verb Type 2	arrange, drip, install, lay, lift, pour, put, spill	arrange, lay, pour, put
	Verb Type 3	contaminate, pollute	contaminate, cover, decorate, fill, flood, pollute, soak, surround
Negative transfer	Verb Type 1		hang, plant
	Verb Type 2		install
	Verb Type 3	cover, decorate, fill, surround	

Interestingly, a closer examination of the data has uncovered that the learners seemed to have a strong reliance on semantic processing to determine the syntactic mappings. For example, verbs like *lay* and *put* are very synonymous with each other. This is the reason why the same relatively large percentage of the learners (69.44%) had correct responses when these verbs were rated in GOCs. Similarly, two other synonyms like *contaminate* and *pollute* were rated correctly by just over half of each sample (52.78%) when used in the FOCs. Anew, this has delivered very strong evidence that the learners had a tendency to rate synonymous verbs in the same syntax even for ones of the upper-intermediate level.

Nevertheless, further explanatory comments are needed for a few verbs like *load* and *spray* when they are used in the GOCs. This is because these verbs still received high correct answers despite their syntactic incongruence between the two languages. In similar fashion, verbs like *drip*, *lift*, *spill*, *flood*, or *soak* were supposed to receive the vast majority of correct responses due to positive transfer. However, this did not happen. For the first case, if the learners were insensitive to L1 syntactic transfer, the explanation could be that the positive evidence has helped the learners override the negative transfer, to some extent. Such recovery from the negative effects

of L1 transfer of these verbs could be linked to the learners' proficiency of English in that the upper-intermediate learners were exposed to a large number of occurrences of these verbs in the test structures. For the second case, the input-based explanation was blamed for the learners' errors of these verbs. They may rarely encounter some figure verbs (*drip, lift, spill*) in the GOCs, and some ground verbs (*flood, soak*) in the FOCs.

Turning to Hypothesis 3, I investigated whether the learners could know how to use different verb classes which were employed in varied syntactic patterns. The structure hierarchy (from high to low) in acquisition of the locative obtained from Tables 4.13 and 4.14 can be summarised as follows:

- (i) Type 2 FOCs → Type 1 FOCs → Type 3 FOCs
- (ii) Type 3 GOCs → Type 1 GOCs → Type 2 GOCs

The acquisitional hierarchy in (i) and (ii) suggests that the learners experienced the least difficulty for the FOCs in Type 2 and the GOCs in Type 3, and the most challenges for the FOCs in Type 3 and the GOCs in Type 2. The research outcomes clarify that they were still in the middle development of the acquisition of the LAs. These findings were not surprising since the learners were claimed to achieve the native-like categories for the FOCs in Type 2, and the GOCs in Type 3 as tested in Hypothesis 1. Amongst the target structures, the learners only attained similar performance when producing the alternating and figure verbs in the FOCs (The FOCs of Type 2 was rated with 0.073 higher than that of Type 1, but this difference was statistically insignificant). Besides this, they failed to distinguish three types of verbs that are applicable to different syntactic constructs. These results did not support the findings in Bullock's (2004) study in which the advanced Korean learners made a distinction between alternating and nonalternating locative verbs. However, these results lend support to previous studies that the learners were not ready to acquire the NRRs which define specific classes of locative verbs occurring in a specific construction (Alotaibi, 2016; Bley-Vroman & Joo, 2001; Joo, 2003; Rezai & Avand, 2011; Sawyer, 1995; Yakhabi et al., 2018). For example, *spill* is a figure verb that is used to show a mass caused by the gravitational force, or *soak* is a ground verb that is used when "a mass is caused to be coextensive with a solid or layer-like medium" (Pinker, 2013, pp. 148-149). In other words, the learners were not sensitive to the

different types of verbs which were used in varied syntactic realisation as the narrow-range verb classes are not supported by L1 Vietnamese correspondences.

Another likely candidate to explain the varied acquisitional trajectories in (i) and (ii) can rest on the assumption that there was structural overgeneralisation of licit FOCs to illicit FOCs as in (4.3), or licit GOCs in Type 3 to illicit GOCs as in (4.4).

(4.3) a. She poured water into the glasses.

b. \*She filled sand into the buckets.

(4.4) a. He soaked his trousers with soap.

b. \*She dripped the floor with oil.

Note that all learners were expected to know the meaning of all target verbs since all of them have passed a Word-Meaning Matching Task to take part in this research. However, this does not entail that they will know all syntactic constructs in which these verbs apply. Given that the ill-formed sentences like (4.3b) or (4.4b) have never occurred in the learners' input, for instance, only 16.67% and 41.67% of the learners judged (4.3b) and (4.4b) ungrammatical, respectively. I speculate that (b)-forms were overgeneralised and could not be unlearned.

The last plausible explanation for VLEs' acquisition of the LA has to do with markedness. Although there is much empirical evidence of marked or unmarked forms for the dative and benefactive structures, a grey area still exists for markedness in terms of locative structures (Goldberg, 1995; Laffut & Davidse, 2002). As discussed, the unmarked features are "core" and thus easier for the learners to acquire, whilst the marked features are peripheral and more difficult to be acquired. My postulation is that, for the alternating and figure classes, the FOCs are unmarked and are acquired prior to the marked GOCs. Conversely, regarding the ground verbs, the unmarked GOCs are acquired prior to the FOCs. This proposal lends support to data of advanced learners in previous studies (Bullock, 2004; Juffs, 1996b).

#### **4.4.4 Conclusion**

The learners' acquisition of the LA has been investigated in terms of language competence, language transfer, and knowledge of locative structures. In terms of the language competence, the learners attained native-like performance on Type 2 FOCs

and Type 3 GOCs. However, the results from the judgment data indicate that the learners found it difficult to differentiate three types of verbs, especially the illicit structures of Types 2 and 3. The NRRs and overgeneralisations both contributed to this learnability problem. In this study, the FT-FA model was found to facilitate the learners' acquisition of the licit FOCs and Type 3 GOCs. The outcomes of this study propose a novel picture of how markedness is related to each locative variant. In this manner, the FOCs are unmarked when used with alternating and figure verb classes, but they are marked when ground verbs are employed.

## **CHAPTER 5: CONCLUSION**

### **5.1 Overview**

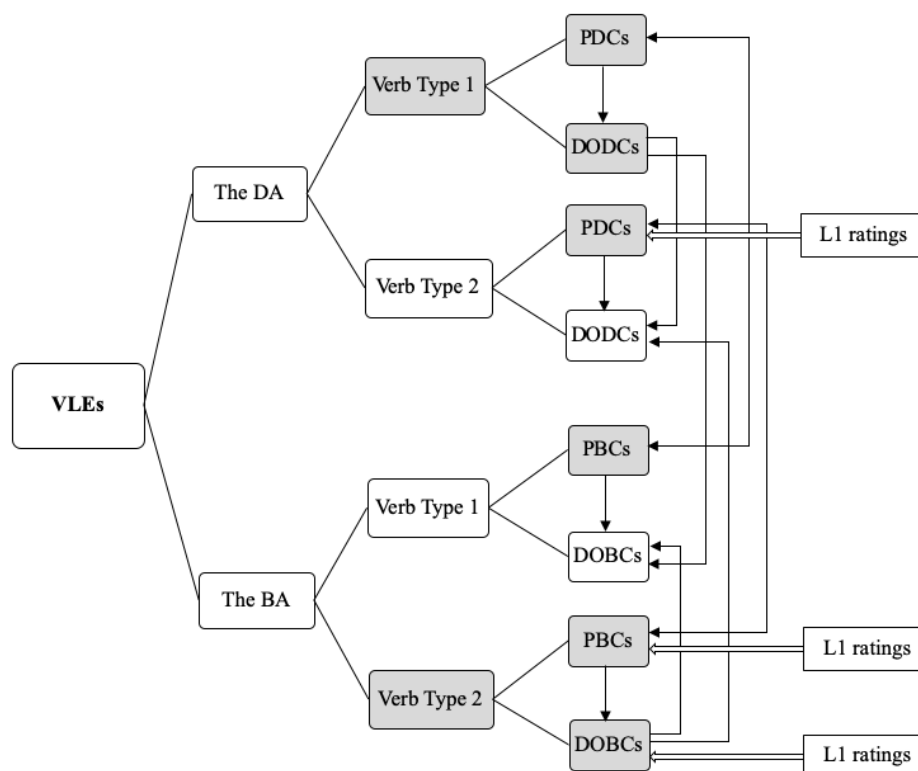
In this thesis, a series of experiments was designed to test learners' acquisition of three argument structure alternations, i.e., the DA, the BA, and the LA, by means of a GJT. As can be revealed from the outcomes, various alternative explanations can be attributed to learners' acquisition of these three argument structures, such as language transfer, markedness, morphological constraint, overgeneralisations, the learners' input, case assignment, or semantic-based explanation. Taken together, acquiring the DA, the BA, and the LA is a complicated developmental process, and no single factor plays a full role in explaining or predicting Vietnamese L1 learners' outcomes. Thus, the results of this present research are further considered in this chapter, which is organised as follows. Section 5.2 lays out the findings of three experiments. In Section 5.3, I go over the contributions of the research to the field, following with its limitations plus suggestions for further research. Section 5.4 then concludes this chapter.

### **5.2 Summary of the results**

The first experiment examined the acquisition of the DA with respect to native-like competence, markedness, and the morphological constraint. The findings suggest that the learners were found to attain native-like grammar regarding all dative structures except illicit DODCs. The other constraints such as markedness, L1 transfer, and the morphological constraint were recognised to accommodate the findings. In terms of markedness, the unmarked PDCs were rated higher than the marked DODCs, implying that markedness associated with UG perspectives plays a pivotal role in impinging upon the learners' acquisition of the DA. This result is particularly in line with Baten and De Cuypere (2014) with respect to the Frequency Hypothesis (Ellis, 1994). The learners' preference of the PDCs can be further argued through the case assignment (Stowell, 1981) in which an NP receiving case must be adjacent to a governing verb or preposition. Another explanation is from Schachter's (1992) Transfer Hypothesis in which a majority of the learners picked a correct hypothesis for verbs used in the PDCs, but a wrong hypothesis for verbs in the DODCs due to their mistaken analysis

of the input. Following this, of all the dative verbs, only *send* and *transport* received a correct hypothesis from all learners. L1 ratings were found to have an influence on PDCs of Type 2, proving that positive transfer has a significant effect on this structure. As for the morphological constraint, the learners showed higher accuracy in the licit DODCs than the illicit DODCs, and this acquisition has been expounded by the FT-FA Hypothesis (Schwartz & Sprouse, 1996), the learning input, or syntactic overgeneralisations.

The second experiment dealt with the acquisition of the BA. It had similar objectives to the first one, and also tested asymmetries between the dative and the benefactive alternations. The pooled data from the subjects in the two groups pointed out that the VLEs obtained native-like performance with respect to benefactive structures, excluding the licit DOBCs. Markedness hypothesis was found to have a great influence on the learners' judgments of the benefactive in which the PBCs were judged significantly better than the DOBCs in both types of benefactive verbs. This constraint has been supported by the FT-FA Hypothesis, the Transfer Hypothesis, and case assignment. In this experiment, L1 ratings were found to have a substantial influence on both syntactic patterns of Verb Type 2. As for the morphological constraint, unlike the first experiment, the illicit DOBCs were judged better than the licit DOBCs. This asymmetry of the DOBCs was expounded by semantic verb classes, the learners' input, FT-FA Hypothesis, as well as overgeneralisations. Finally, the comparisons of the ratings were undertaken by observing two pairs within each verb type: PDCs-PBCs and DODCs-DOBCs. The outcome of the first pair discloses that the learners had similar performance between two unmarked forms, and this was accounted for by the positive transfer. Conversely, the rating comparison between the two marked forms diverged between licit and illicit DOCs. That is, while the licit DOBCs were rejected more strongly than the licit DODCs, the illicit DODCs were rejected more than the illicit DOBCs. These varied asymmetries of the DOCs were elucidated by either the semantic features or negative transfer (crosslinguistic interference) of the preposition *cho* 'for' in the benefactive. Results of Experiments 1 and 2 are summarised in Figure 5.1 below.

**Figure 5.1***Results of Experiments 1 and 2*

*Note.* The shaded boxes stand for the learners' native-like competence

$A \longrightarrow B$ : A was rated at higher levels of acceptability than B

$A \longleftarrow B$ : A was rated at lower levels of acceptability than B

$A \longleftrightarrow B$ : A was rated at similar levels of acceptability as B

$A \Longleftarrow B$ : B had an effect on A

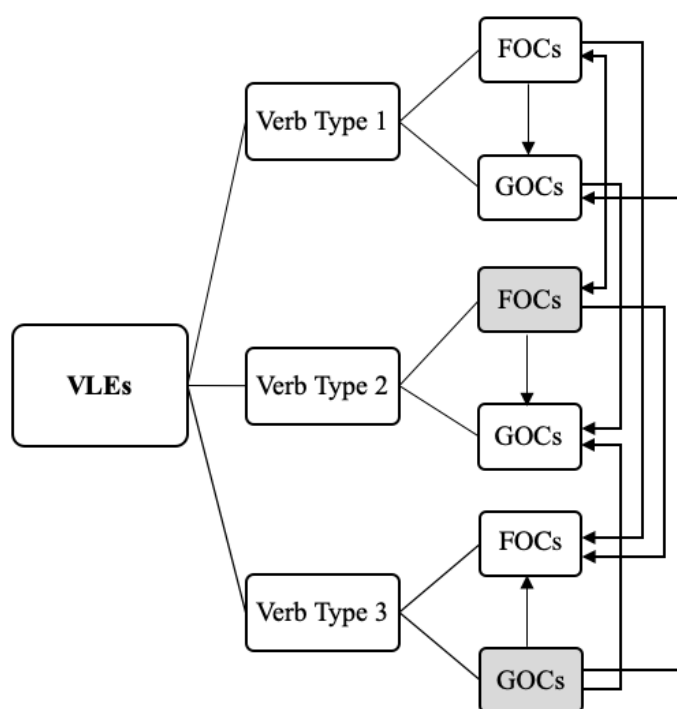
The last experiment looked at the LA with reference to language competence, language transfer, and knowledge of locative structures. The findings disclose that the learners attained native-like performance on Type 2 FOCs and Type 3 GOCs. Nevertheless, they could not distinguish the three verb classes, that is, alternating class, figure class, and ground class. In particular, Type 2 GOCs and Type 3 FOCs received the most errors from the learners. The FT-FA Hypothesis validated this acquisition. Plus, the NRRs and overgeneralisations also exerted an influence on the learners'



incomplete acquisition of locative structures. Predicated upon the outcomes, my proposed markedness for the locative is that the FOCs are unmarked when used with alternating and figure verb classes, but they are marked in the cases where ground verbs are used. The results of Experiment 3 are summarised in Figure 5.2.

**Figure 5.2**

*Results of Experiment 3*



In a nutshell, the most striking feature drawn from the whole thesis is that the three argument structure alternations were not fully acquired by the learners. The experimental participants found it most difficult to acquire the LA as compared with the dative and benefactive alternations. As summarised above, there were three out of four structures for which the learners had native-like competence in the first two experiments. Yet, there were only two out of six structures for which the learners had native-like competence in the last experiment. What is more, although the dative and benefactive structures have been discussed to generate some syntactic and semantic features in common, the empirical data between them did not happen in the same fashion. In Experiments 1 and 2, when the learners exhibited actual native-like competence in the use of the PDCs and the PBCs, they were still faced with some

obstacles when acquiring the DODCs or the DOBCs, especially Type 2 DODCs and Type 1 DOBCs. It is, however, important to note that although the learners achieved native-like proficiency for Type 1 DODCs and Type 2 DOBCs, they still provided numerous inaccurate responses for such structures (see Table 4.1 and Table 4.8). This entails the fact that the NSs also had many difficulties of using verbs in the DOCs. This predicates that the overgeneralisations about the DA and the BA were made not only by the experimental subjects but also by the Australian native speakers. Although the transfer effect was found in all studies, the significant effect of L1 items was only applied to Type 2 PDCs (Experiment 1), and Type 2 structures (Experiment 2).

### 5.3 Contributions of the study

This thesis draws out both pedagogical and SLA implications. With regard to SLA research, although the acquisition of the dative, benefactive and locative alternations was conducted in a number of L1s, there has been, so far, no reported research examining the acquisition of such alternations by Vietnamese L1 learners learning English. This thesis has thus thrown light on how learners acquire such type of syntactic alternations, and how learners have relied on varied factors to accommodate their achievement. It is believed in the literature that L1 transfer can happen at the early stage, when learners' L2 knowledge is insufficient, so they have to rely on their L1 (Ringbom, 1987; Shirai, 1992). This thesis has provided more evidence on transfer theory that the influence of L1 can even occur for upper-intermediate learners. More importantly, by examining three types of structures at the same time, the research has provided a better understanding of the correlation of learners' acquisition amongst these alternations. For example, in comparison with the dative and benefactive alternations, it was shown that the LA has created the most trouble for the learners, or an asymmetry of the DOCs between the dative and benefactive had been interpreted by the influence of language transfer (both positive and negative).

From the pedagogical intervention, the current research has unveiled the shortcomings in the learners' acquisition of argument structures. It indicated that the three argument structures added many complications to Vietnamese upper-intermediate learners L2 learning. The research demonstrated their inadequate acquisition of the target structures, showing where they repeated numerous errors with popular verbs (e.g., *deliver*, *donate*, *collect*) in the DOCs. This could have reflected their inadequate word learning strategies in which some learners may learn vocabulary

isolated from contextual diversity provided by authentic texts, or they are short of frequent vocabulary practice in real-time interactions. Also, L1 transfer needs to be taken into consideration for EFL teaching activities. EFL Vietnamese teachers should be aware of any cross-linguistic syntactic behaviours in the course of teaching in particular so that they can help their students to minimise any negative transfer occurring through language production.

Another point to note is that verbs with similar meanings are normally attached to similar syntactic patterns (Levin, 1993; Levin & Hovav, 1998; Yi & Koenig, 2016). Hence, it is recommended that teachers should explain that different semantic verbs are likely to denote changes to their argument structures. Along with this, verb etymologies and NRRs have also been proved to create a hindrance to learners' acquisition. Hence, the education policymakers and teachers should be mindful of these issues in the course of designing the curriculum.

Last but not least, both learners and teachers should be aware that learning forms, rules, or much vocabulary is important but insufficient in mastering a non-primary language. The fact is that being exposed to enough input in different contexts is an essential condition for learners to acquire native-like grammar, since rules or forms can be automatically obtained through the interaction. Following this fashion, more interactions should be focused on marked forms (e.g., DOCs) as this is an effective way to help learners acquire a target structure like NSs in a natural environment. One suggested solution is that task-based language teaching can be combined with authentic texts in order to enhance learners' interaction competence (Hismanoglu & Hismanoglu, 2011). In brief, the research makes an important contribution to the theoretical aspects of the field regarding SLA and from the pedagogical and curriculum perspective.

#### **5.4 Limitations and suggestions for further research**

Even though this study brings substantial benefits to SLA research as well as to pedagogical implications, it is not without some limitations. Some approaches are thus suggested to extend the findings for future research.

First of all, Experiment 2 does not include the dative verbs that are only compatible with the DODCs (e.g., *ask*, *cost*, *believe*), since I identified some difficult problems when attempting to translate these into Vietnamese like Experiment 3 with the LA. Because of time constraints, the research decision was made that this was

outside the parameters for the present study, and this shortcoming thus needed to be tackled in future studies.

Secondly, taking into account time constraints, while Experiment 3 investigated the LA with transitive verbs, intransitive locative verbs, as in (5.1), were not part of this research.

- (5.1)           a. The locusts are swarming in the back yard.  
                  b. The back yard is swarming with locusts.

Hence, future research may investigate and compare the proposed LA with intransitive verbs as this type of alternation is also predicted to cause some problems for many Vietnamese learners.

Thirdly, given that language proficiency is known to have a significant influence on the occurrence of transfer (Jarvis & Pavlenko, 2008), future studies should compare how Vietnamese learners of different levels of English acquire the argument structure alternations. For example, if the different constraints were examined by comparing L2 language proficiency levels (e.g., three experimental Vietnamese groups: elementary, intermediate, and advanced), this would provide deeper insights into the L2 developmental process in this regard.

In this thesis, the collected demographic data denote that a couple of VLEs also had elementary or intermediate levels of proficiency of L3 and L4 such as Japanese, French, and Korean. There is evidence that not only the L1 but also other languages that the learners know may also be reflected in a learner language ability (Ringbom, 1987). Accordingly, it would be really interesting to further explore whether Vietnamese learners' proficiency of the third language (L3) or the fourth language (L4) has any influence on their acquisition of the argument structures in this study.

Next, I bring a gap fill task in Experiments 1 and 2 forward for future research to examine the role of transfer of prepositions *đến* 'to' or *cho* 'for' in the dative and benefactive, respectively. In particular, the learners should be required to fill suitable prepositions in a blank (e.g., I baked a cake \_\_\_\_\_ him). The findings from a gap fill task and a GJT can then be compared with each other so as to find any track of transfer.

In this research project, the data elicitation for the NSs had to be remotely conducted due to COVID-19. Therefore, the research methodology could have been

improved if the in-person experimental task had been undertaken for the control group as well.

Finally, a usage-based approach can be applied to the analysis of the findings in the three experiments in the future. Unlike a language-specific instinct (i.e., markedness, UG), the usage-based theories focus on the interaction of cognition and use (Goldberg, 1995; Ibbotson, 2013; Tomasello, 2005).

**Table 5.1**

*Frequency of Locative Verbs in COCA<sup>36</sup>*

Type 1	FOCs	GOCs	Type 2	FOCs	Type 3	GOCs
Brush (7419)	2286	491	Arrange (29113)	3917	Contaminate (843)	96
Load (7698)	2201	178	Drip (7140)	453	Cover (59877)	3178
Hang (46261)	3178	21	Install (34398)	3255	Decorate (3021)	400
Pack (12119)	2108	319	Lay (105788)	10306	Fill (43240)	5597
Plant (9154)	3551	113	Lift (54950)	7481	Flood (3583)	831
Spray (3682)	1007	566	Pour (36408)	5752	Pollute (1152)	123
Spread (45618)	6047	210	Put (616826)	33434	Soak (10392)	65
Wrap (10583)	4206	230	Spill (17388)	1455	Surround (5015)	346
Mean frequency	3073	266		8257		1330

<sup>36</sup> To extract occurrences of one verb in a given syntax from COCA, I applied four varied criteria for each verb. For instance, in the case of *contaminate*, I used phrases like “CONTAMINATE\_V \* N WITH \* N” (e.g., *contaminates the music with unpleasant sounds*), “CONTAMINATE\_V N WITH N” (e.g., *contaminating Mars with microbes*), “CONTAMINATE\_V \* N WITH N” (e.g., *contaminating the water with sodium*), and “CONTAMINATE\_V N WITH \* N” (e.g., *contaminating groundwater with petroleum material*). Hence, the clear difference amongst these queries is only the number of words which formulate the arguments. Although it is impossible to exclude all irrelevant syntaxes in the outcome like *plant corn with the Indians*, or *spread butter with a knife*, the frequency picture of a given syntax is still convincing.

To take an exemplar for Experiment 3, the frequency of usage of locative verbs can be extracted from the Corpus of American English (COCA) (Davies, 2008), as in Table 5.1. This database has more than 1.1 billion words of data used in various genres such as fiction, web, or subtitles from movies. Table 5.1 illustrates the frequency of each verb predicated upon the COCA. The numbers in bracket represent the frequency of those verbs in the COCA. For example, the verb *brush* occurs 7419 times per 1.1 billion words in the COCA, and this verb appears 2286 and 491 times in the FOC and the GOC, respectively. My final assumption comes from the frequency hypothesis put forth by Ellis (1994, p. 269). Following this, “the order of L2 acquisition is determined by the frequency with which different linguistic items occur in the input” although the frequency taken from the data is not quite similar to the data of learners’ interaction. However, note that the texts of COCA are taken from various sources like blogs, websites, academic journals, movies, or magazines. Therefore, the greater the verb frequency is, the more interaction with that verb the learners have. For example, in Table 5.1, the occurrences of *put* and *lay* in the FOC are 33434 and 10306, respectively, meaning that learners had more chance to interact *put* more than *lay* in terms of the FOC. Intuitively, there seems to have a correlation between the extracted probabilities of the locative verbs as in Table 5.1 with learners’ correct responses of these verbs (see Appendices P and Q). Nevertheless, some counter-arguments over this approach have been raised since grammar and usage are apparently distinct (Newman, 1996). Most importantly, the native-speaker-based data obtained from COCA may not truly mirror EFL learners’ acquisition of argument structures. Hence, it could be more convincing if some comparisons between learner’s judgments and learner corpora are made, and this is open to question for the future research.

Once and for all, results in three experiments have suggested that there should be a close correlation between SLA and pedagogical implications. As Larsen-Freeman and Long (2014, p. 38) state that:

“The most obvious beneficiary of an increased understanding of SLA is the second language teaching profession, and through the teachers, the learners themselves. Indeed, many researchers have been or remain language teachers who find themselves attracted to SLA research as a source of insight into the teaching/learning process.”

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## APPENDIX A

### Michigan Test

*Choose ONE correct answer for each of the following questions. Write your answers in the answer sheet.*

1. "I didn't know Michael and Stephanie are married."  
"They \_\_\_\_\_ married six months ago"  
A. have gotten  
B. got  
C. will have gotten  
D. had gotten
  
2. According to the TV guide, the movie \_\_\_\_\_ at ten.  
A. will start  
B. is starting  
C. starts  
D. will be starting
  
3. "Jim \_\_\_\_\_ his clothes on the floor! I can't take it anymore!"  
"I think you should have a word with him!"  
A. had always been leaving  
B. was always leaving  
C. is always leaving  
D. has always left
  
4. She is the most beautiful girl I \_\_\_\_\_.  
A. ever saw  
B. have never seen  
C. have ever seen  
D. had ever seen
  
5. "This time next week we \_\_\_\_\_ our final exams!"  
"Must you remind me?"  
A. are taking  
B. will be taking  
C. will have taken  
D. will have been taking

6. When we finally got to the theater, the play \_\_\_\_\_.

- A. already started
- B. started already
- C. had already started
- D. has already started

7. "When will you have the report ready?"

"I \_\_\_\_\_ it by the end of the week."

- A. am finishing
- B. will have finished
- C. will be finishing
- D. will have been finishing

8. "What's the problem, honey?"

"I can't open this jar. \_\_\_\_\_ you help me?"

- A. Must
- B. Should
- C. Can
- D. Shall

9. "What would you like to do tonight?"

"We \_\_\_\_\_ go to the movies."

- A. would
- B. ought
- C. need
- D. could

10. "So, are you going to take the job or not?"

"It's difficult for me \_\_\_\_\_ right now. I need more time to think about it."

- A. decide
- B. deciding
- C. to decide
- D. to deciding

11. Laura speaks Spanish really \_\_\_\_\_.

- A. well
- B. good
- C. better
- D. best

**12.** There is \_\_\_\_\_ cake left but not enough for everyone.

- A. few
- B. little
- C. a few
- D. a little

**13.** \_\_\_\_\_ the bus was late, I got to work on time.

- A. Despite
- B. Despite of
- C. However
- D. Even though

**14.** Barbara was \_\_\_\_\_ tired that she went straight to bed after she got back from work.

- A. too
- B. such
- C. very
- D. so

**15.** “He was right!”

“Oh, I know! I really wish I \_\_\_\_\_ his advice!”

- A. took
- B. have taken
- C. had taken
- D. would take

**16.** “I’m exhausted.”

“So \_\_\_\_\_ I. Let’s stop for a rest.”

- A. do
- B. was
- C. did
- D. am

**17.** Mom bought me \_\_\_\_\_ scarf for my birthday.

- A. a beautiful, Italian, silk
- B. a beautiful, silk, Italian
- C. an Italian, beautiful, silk
- D. a silk, beautiful, Italian

**18.** “Thanks for your help, Jim!”

“Don’t mention it. After all, I’m your best friend, \_\_\_\_\_”

- A. amn’t I?
- B. don’t I?
- C. aren’t I?
- D. am I?

**19.** “Mmm... \_\_\_\_\_ delicious!”

“I’m glad you like my cake!”

- A. how
- B. what
- C. that
- D. such

**20.** They live \_\_\_\_\_ 25 Mulberry Street.

- A. on
- B. in
- C. to
- D. at

**21.** I couldn’t fall asleep last night, so I tried \_\_\_\_\_ to music but that didn’t help either.

- A. listening
- B. to listen
- C. listen
- D. to have listened

**22.** “What do you think I should do?”

“If I \_\_\_\_\_ you, I’d call him right now.”

- A. am
- B. were
- C. will be
- D. have been

**23.** This exercise isn’t as easy \_\_\_\_\_ it may seem.

- A. so
- B. than
- C. from
- D. as

**24.** “My hair has grown really long, don’t you think?”

“It’s time you \_\_\_\_\_ a haircut!”

- A. would get
- B. got
- C. will get
- D. get

**25.** “Did you do anything special on the weekend?”

“We visited the town \_\_\_\_\_ our grandfather was born.”

- A. where
- B. that
- C. which
- D. when

**26.** I’ll lend you my CD player \_\_\_\_\_ you promise to take good care of it.

- A. unless
- B. although
- C. so as
- D. as long as

**27.** Never before \_\_\_\_\_ so embarrassed!

- A. had I felt
- B. I had felt
- C. I felt
- D. I feel

**28.** I’ve worked \_\_\_\_\_ all my life to save this money and I’m not going to throw it away like that.

- A. hardly
- B. hard
- C. harder
- D. hardest

**29.** Neither Tim \_\_\_\_\_ Rob are coming with us tonight because they have a lot of work to do.

- A. and
- B. or
- C. nor
- D. not

**30.** Do you prefer coffee \_\_\_\_\_ tea?

- A. from
- B. than
- C. for
- D. to

**31.** “I’m afraid we have to set off early in the morning. Do you have a problem with that?”

“Not at all. You see, I am used \_\_\_\_\_ up early every morning.”

- A. get
- B. to get
- C. getting
- D. to getting

**32.** We always go to school \_\_\_\_\_.

- A. by feet
- B. with foot
- C. on feet
- D. on foot

**33.** Give me a call when you \_\_\_\_\_ back.

- A. are getting
- B. get
- C. will get
- D. will have gotten

**34.** “Shall we go out tonight?”

“Well, I’m a bit tired so I’d rather \_\_\_\_\_ in.”

- A. stay
- B. to stay
- C. staying
- D. to staying

**35.** “How was the lecture?”

“Oh, it was so \_\_\_\_\_ that I fell asleep.”

- A. boredom
- B. bored
- C. bore
- D. boring



- 36.** The kid \_\_\_\_\_ breaking the vase.  
A. refused  
B. apologized  
C. denied  
D. said
- 37.** The Titanic sank on its first \_\_\_\_\_ across the Atlantic.  
A. voyage  
B. excavation  
C. excursion  
D. trip
- 38.** Does the job \_\_\_\_\_ a lot of traveling?  
A. embody  
B. include  
C. consist  
D. involve
- 39.** While I was cleaning the attic, I \_\_\_\_\_ some old pictures.  
A. found out  
B. came across  
C. ran into  
D. gave up
- 40.** Please \_\_\_\_\_ me to call him later.  
A. remember  
B. reminisce  
C. remind  
D. recollect
- 41.** I can't see them anywhere. They're \_\_\_\_\_ late.  
A. obviously  
B. seriously  
C. furiously  
D. particularly
- 42.** Michael is responsible and \_\_\_\_\_ at his job, which makes him a real asset to the company.  
A. deficient  
B. sufficient  
C. effective  
D. efficient

**43.** My brother is so good at chess that I've never managed to \_\_\_\_\_ him.

- A. earn
- B. pass
- C. beat
- D. gain

**44.** It's been months since they last \_\_\_\_\_ me a visit.

- A. gave
- B. paid
- C. went
- D. took

**45.** He is in \_\_\_\_\_ to the bank.

- A. loan
- B. debt
- C. rent
- D. grant

**46.** May I have your \_\_\_\_\_, please? I have an announcement to make.

- A. warning
- B. notice
- C. caution
- D. attention

**47.** The college \_\_\_\_\_ contains useful information about the courses it offers.

- A. chart
- B. handbook
- C. notebook
- D. catalog

**48.** Steve's parents give him a weekly \_\_\_\_\_, which he can use any way he likes.

- A. income
- B. salary
- C. allowance
- D. payment

**49.** Don't \_\_\_\_\_ at people like that! It's really rude!

- A. observe
- B. stare
- C. watch
- D. notice

**50.** Mr. Maynard won't be coming in today. He has a high temperature and \_\_\_\_\_ throat.

- A. an ache
- B. a painful
- C. a sore
- D. a hurt

**51.** I never have three \_\_\_\_\_ a day; I usually skip lunch.

- A. dishes
- B. meals
- C. takeouts
- D. plates

**52.** Two armed men \_\_\_\_\_ the bank on Wooster Street this morning.

- A. withheld
- B. stole
- C. burgled
- D. robbed

**53.** When it comes to crime, \_\_\_\_\_ is better than cure.

- A. avoidance
- B. ban
- C. prevention
- D. infection

**54.** I think I'm lost. Could you tell me the \_\_\_\_\_ to the subway station, please?

- A. instruction
- B. path
- C. route
- D. way

**55.** I'm sorry, sir, but I think you're \_\_\_\_\_ me for someone else.

- A. misplacing
- B. mistaking
- C. misusing
- D. mistreating

**56.** The teacher \_\_\_\_\_ the pupils for being noisy.

- A. told off
- B. called off
- C. put off
- D. took off

**57.** See you at ten \_\_\_\_\_.

- A. just
- B. exactly
- C. accurately
- D. sharp

**58.** I'm a big fan of her work but I didn't really like her \_\_\_\_\_ movie.

- A. lately
- B. later
- C. latest
- D. late

**59.** He's lazy. As a matter of \_\_\_\_\_, he's never worked a day in his life.

- A. truth
- B. fact
- C. issue
- D. reality

**60.** My dad works for a law firm which has a lot of business people as \_\_\_\_\_.

- A. clients
- B. customers
- C. colleagues
- D. consumers

**61.** It is said that it won't be long before teachers are \_\_\_\_\_ by robots.

- A. changed
- B. exchanged
- C. extracted
- D. replaced

**62.** My sneakers are too small and don't \_\_\_\_\_ me anymore.

- A. fit
- B. match
- C. suit
- D. associate

**63.** She called out his name but he didn't even \_\_\_\_\_ turn round to look at her.

- A. exert
- B. disturb
- C. bother
- D. interrupt

**64.** \_\_\_\_\_ by the reviews, it must be an interesting book.

- A. Telling
- B. Saying
- C. Deciding
- D. Judging

**65.** He isn't \_\_\_\_\_ to pass the test.

- A. possibly
- B. likely
- C. probably
- D. definitely

**66.** Before you decide, I think you should \_\_\_\_\_ their offer more carefully.

- A. claim
- B. think
- C. conceive
- D. consider

**67.** I don't have to drive to work because buses run \_\_\_\_\_.

- A. punctually
- B. regularly
- C. occasionally
- D. comfortably

**68.** Can you \_\_\_\_\_ a secret? Louise is organizing a surprise party for Matt's birthday!

- A. hold
- B. take
- C. catch
- D. keep

**69.** Let's clean this room for the \_\_\_\_\_ being and do the rest of the house later.

- A. moment
- B. minute
- C. time
- D. present

**70.** After retiring, Steven \_\_\_\_\_ bowling to keep himself occupied.

- A. took up
- B. put on
- C. got over
- D. gave away

## APPENDIX B

### Word-Meaning Matching Task

This test consists of three parts. In each part, match one verb in the first column with its best meaning in the second column. Write your answers in the third column. Note that there are some verbs which are not used. The first verb has been done as an example.

#### Part 1:

Verbs	Meanings	Answer
1. Select	A. Thu thập	1 - T
2. Build	B. Đưa	2 -
3. Collect	C. Bao phủ, trải (mền, ga giường)	3 -
4. Contaminate	D. Gửi (thư, tin nhắn)	4 -
5. Cover	E. Làm ngập lụt	5 -
6. Decorate	F. Rót đầy, làm đầy	6 -
7. Express	G. Kể (chuyện), nói ra	7 -
8. Fill	H. Hợp tác	8 -
9. Flood	I. Vận chuyển	9 -
10. Gain	J. Đổ (nước)	10 -
11. Give	K. Gặp gỡ	11 -
12. Install	L. Trang trí	12 -
13. Lift	M. Nâng lên	13 -
14. Pour	N. Làm ô nhiễm	14 -
15. Purchase	O. Cài đặt (phần mềm)	15 -
16. Put	P. Xây dựng	16 -
17. Send	Q. Giành được, kiếm được	17 -
18. Tell	R. Mua	18 -
19. Transport	S. Đổ, đặt	19 -
	<b>T. Chọn lựa</b>	
	U. Bày tỏ, diễn đạt	

**Part 2:**

Verbs	Meanings	Answers
20. Arrange	A. Nhận được, lấy được	20 -
21. Brush	B. Làm tràn	21 -
22. Carry	C. Làm	22 -
23. Construct	D. Chiến thắng, giành được	23 -
24. Drip	E. Viết	24 -
25. Get	F. Xây dựng	25 -
26. Hang	G. Bơm, phun (thuốc, sơn)	26 -
27. Illustrate	H. Minh hoạ, làm rõ	27 -
28. Load	I. Ngâm, nhúng	28 -
29. Make	J. Ném đi	29 -
30. Plant	K. Gửi (hàng hoá)	30 -
31. Recover	L. Phục hồi, thu được	31 -
32. Ship	M. Gói, bao bọc, quấn	32 -
33. Soak	N. Mua	33 -
34. Spill	O. Chải, quét	34 -
35. Spray	P. Chất (hàng)	35 -
36. Win	Q. Treo (áo, quần)	36 -
37. Wrap	R. Trồng (cây, hoa)	37 -
38. Write	S. Làm nhỏ giọt	38 -
	T. Sắp xếp	
	U. Mang, vác	

**Part 3:**

Verbs	Meanings	Answers
39. Buy	A. Trả ra, căng ra	39 -
40. Compose	B. Kiếm được (tiền)	40 -
41. Create	C. Đóng gói, đóng kiện	41 -
42. Deliver	D. Mua	42 -
43. Donate	E. Đẽ, đặt, đẽ	43 -
44. Earn	F. Đạt được	44 -
45. Explain	G. Soạn (nhạc)	45 -
46. Lay	H. Thu xếp	46 -
47. Obtain	I. Chuyển nhượng	47 -
48. Pack	J. Bao quanh, bao vây	48 -
49. Pass	K. Làm ô nhiễm	49 -
50. Pollute	L. Cho xem, cho thấy	50 -
51. Receive	M. Nhận được	51 -
52. Show	N. Trì hoãn	52 -
53. Spread	O. Giải thích	53 -
54. Submit	P. Đề trình, đưa ra (ý kiến)	54 -
55. Surround	Q. Thi đỗ, chuyển qua	55 -
56. Teach	R. Hiến tặng, quyên góp	56 -
57. Transfer	S. Giảng dạy	57 -
	T. Giao (hàng)	
	U. Tạo ra	



## APPENDIX C

### Dative Alternation

#### (L2 English Sentences)

1. She showed a house to the engineer.
2. She showed the engineer a house.
3. He gave a book to his daughter.
4. He gave his daughter a book.
5. He sent some messages to the teacher.
6. He sent the teacher some messages.
7. She told some secrets to her lawyer.
8. She told her lawyer some secrets.
9. She shipped a parcel to the farmers.
10. She shipped the farmers a parcel.
11. He taught a song to his nephews.
12. He taught his nephews a song.
13. He carried some toys to the girls.
14. He carried the girls some toys.
15. She passed some notebooks to her pupils.
16. She passed her pupils some notebooks.
17. She illustrated a project to the manager.
18. She illustrated the manager a project.
19. He donated a kidney to his mother.
20. He donated his mother a kidney.
21. He submitted some proposals to the director.
22. He submitted the director some proposals.
23. She expressed some opinions to her sister.
24. She expressed her sister some opinions.
25. She delivered a package to the clients.
26. She delivered the clients a package.

27. He explained a concept to his students.
28. He explained his students a concept.
29. He transported some machines to the workers.
30. He transported the workers some machines.
31. She transferred some assets to her cousins.
32. She transferred her cousins some assets.

## APPENDIX D

### Dative Alternation

#### (L1 Vietnamese Sentences)

1. Cô ấy đã chỉ ngôi nhà cho anh kỹ sư xem.
2. Cô ấy đã chỉ cho anh kỹ sư xem ngôi nhà.
3. Anh ấy đã đưa một quyển sách đến cho con gái anh ấy.
4. Anh ấy đã đưa cho con gái anh ấy một quyển sách.
5. Anh ấy đã gửi một vài tin nhắn đến thầy giáo.
6. Anh ấy đã gửi đến thầy giáo một vài tin nhắn.
7. Cô ấy đã nói một vài bí mật đến luật sư của cô ấy.
8. Cô ấy đã nói cho luật sư của cô ấy một vài bí mật.
9. Cô ấy đã gửi một bưu phẩm đến những người nông dân.
10. Cô ấy đã gửi đến những người nông dân một bưu phẩm.
11. Anh ấy đã dạy một bài hát cho những cháu trai của anh ấy.
12. Anh ấy đã dạy cho những cháu trai của anh ấy một bài hát.
13. Anh ấy đã mang một số đồ chơi cho các bé gái.
14. Anh ấy đã mang đến cho các bé gái một số đồ chơi.
15. Cô ấy đã đưa một vài quyển vở đến cho các học sinh của cô ấy.
16. Cô ấy đã đưa đến cho các học sinh của cô ấy một vài quyển vở.
17. Cô ấy đã minh họa một dự án đến người quản lý.
18. Cô ấy đã minh họa đến người quản lý một dự án.
19. Anh ấy đã hiến tặng một quả thận cho mẹ anh ấy.
20. Anh ấy đã hiến tặng cho mẹ anh ấy một quả thận.
21. Anh ấy đã đệ trình một vài kế hoạch đến giám đốc.
22. Anh ấy đã đệ trình đến giám đốc một vài kế hoạch.
23. Cô ấy đã trình bày một vài ý kiến đến chị cô ấy.
24. Cô ấy đã trình bày đến chị cô ấy một vài ý kiến.
25. Cô ấy đã giao một bưu kiện đến những khách hàng.

26. Cô ấy đã giao đến những khách hàng một bưu kiện.
27. Anh ấy đã giải thích một khái niệm đến những sinh viên của anh ấy.
28. Anh ấy đã giải thích đến những sinh viên của anh ấy một khái niệm.
29. Anh ấy đã vận chuyển một số máy móc đến những công nhân.
30. Anh ấy đã vận chuyển cho những công nhân một số máy móc.
31. Cô ấy đã chuyển nhượng một số tài sản cho các anh họ của cô ấy.
32. Cô ấy đã chuyển nhượng cho các anh họ của cô ấy một số tài sản.

## APPENDIX E

### Benefactive Alternation

#### (L2 English Sentences)

1. She won a prize for the child.
2. She won the child a prize.
3. He wrote a storybook for his son.
4. He wrote his son a storybook.
5. He earned some contracts for the owner.
6. He earned the owner some contracts.
7. She got some presents for her mother.
8. She got her mother some presents.
9. He made a desk for the customers.
10. He made the customers a desk.
11. He built a shed for his parents.
12. He built his parents a shed.
13. She gained some benefits for the farmers.
14. She gained the farmers some benefits.
15. She bought some dictionaries for her students.
16. She bought her students some dictionaries.
17. She recovered a debt for the accountant.
18. She recovered the accountant a debt.
19. He composed a song for his lover.
20. He composed his lover a song.
21. He collected some files for the investigator.
22. He collected the investigator some files.
23. She obtained some items for her friend.
24. She obtained her friend some items.
25. She created a job for the teenagers.

26. She created the teenagers a job.
27. He constructed a building for his employees.
28. He constructed his employees a building.
29. He received some letters for the neighbours.
30. He received the neighbours some letters.
31. She purchased some tools for her brothers.
32. She purchased her brothers some tools.

## APPENDIX F

### Benefactive Alternation

#### (L1 Vietnamese Sentences)

1. Cô ấy đã giành được một giải thưởng cho đứa bé.
2. Cô ấy đã giành cho đứa bé một giải thưởng.
3. Ông ấy đã viết một quyển truyện cho con trai ông ấy.
4. Ông ấy đã viết cho con trai ông ấy một quyển truyện.
5. Anh ấy đã kiếm được một vài hợp đồng cho người chủ.
6. Anh ấy đã kiếm được cho người chủ một vài hợp đồng.
7. Cô ấy đã mang một vài món quà cho mẹ của cô ấy.
8. Cô ấy đã mang cho mẹ của cô ấy một vài món quà.
9. Ông ấy đã đóng một cái bàn cho những khách hàng.
10. Ông ấy đã đóng cho những khách hàng một cái bàn.
11. Anh ấy đã xây một cái nhà kho cho bố mẹ của anh ấy.
12. Anh ấy đã xây cho bố mẹ của anh ấy một cái nhà kho.
13. Cô ấy đã giành được một số quyền lợi cho những người nông dân.
14. Cô ấy đã giành được cho những người nông dân một số quyền lợi.
15. Cô ấy đã mua một vài quyển từ điển cho những sinh viên của cô ấy.
16. Cô ấy đã mua cho những sinh viên của cô ấy một vài quyển từ điển.
17. Cô ấy đã đòi lại một khoản nợ cho một nhân viên kế toán.
18. Cô ấy đã đòi lại cho nhân viên kế toán một khoản nợ.
19. Anh ấy đã sáng tác một bài hát cho người yêu của anh ấy.
20. Anh ấy đã sáng tác cho người yêu của anh ấy một bài hát.
21. Ông ấy đã thu thập được một vài hồ sơ cho nhân viên điều tra.
22. Ông ấy đã thu thập được cho nhân viên điều tra một vài hồ sơ.
23. Cô ấy đã kiếm được một số món hàng cho bạn của cô ấy.
24. Cô ấy đã kiếm được cho bạn của cô ấy một số món hàng.
25. Bà ấy đã tạo một công việc cho những thanh thiếu niên.
26. Bà ấy đã tạo cho những thanh thiếu niên một công việc.

27. Anh ấy đã xây dựng một toà nhà cho những nhân viên của anh ấy.
28. Anh ấy đã xây dựng cho những nhân viên anh ấy một toà nhà.
29. Ông ấy đã nhận giúp một vài bức thư cho những người hàng xóm.
30. Ông ấy đã nhận giúp những người hàng xóm một vài bức thư.
31. Cô ấy đã mua một số dụng cụ cho những anh trai của cô ấy.
32. Cô ấy đã mua cho những anh trai của cô ấy một số dụng cụ.



## APPENDIX G

### Locative Alternation

1. She brushed butter over the chicken.
2. She brushed the chicken with butter.
3. He loaded cargo onto his truck.
4. He loaded his truck with cargo.
5. He hung towels on the line.
6. He hung the line with towels.
7. She planted herbs in her garden.
8. She planted her garden with herbs.
9. She spread honey on the pancakes.
10. She spread the pancakes with honey.
11. He sprayed paint onto his walls.
12. He sprayed his walls with paint.
13. He wrapped ribbons around the boxes.
14. He wrapped the boxes with ribbons.
15. She packed gifts into her suitcases.
16. She packed her suitcases with gifts.
17. She dripped oil on the floor.
18. She dripped the floor with oil.
19. He installed software onto his computer.
20. He installed his computer with software.
21. He laid flowers on the grave.
22. He laid the grave with flowers.
23. She arranged chairs around her piano.
24. She arranged her piano with chairs.
25. She poured water into the glasses.
26. She poured the glasses with water.
27. He spilled sauce over his clothes.

28. He spilled his clothes with sauce.
29. He lifted stones out of the tanks.
30. He lifted the tanks with stones.
31. She put books on her shelves.
32. She put her shelves with books.
33. She contaminated plastic onto the river.
34. She contaminated the river with plastic.
35. He flooded rubbish into his house.
36. He flooded his house with rubbish.
37. He decorated stars on the tree.
38. He decorated the tree with stars.
39. She covered sheets onto her furniture.
40. She covered her furniture with sheets.
41. She filled sand into the buckets.
42. She filled the buckets with sand.
43. He soaked soap over his trousers.
44. He soaked his trousers with soap.
45. He surrounded fences around the buildings.
46. He surrounded the buildings with fences.
47. She polluted chemicals into her flowerbeds.
48. She polluted her flowerbeds with chemicals.

## APPENDIX H

### Learners' Responses of English PDCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Carry	2 (5.56)	0 (0)	34 (94.44)
Give	0 (0.00)	0 (0)	36 (100)
Pass	3 (8.33)	2 (5.56)	31 (86.11)
Send	0 (0.00)	0 (0.00)	36 (100.00)
Ship	1 (2.78)	2 (5.56)	33 (91.66)
Show	1 (2.78)	1 (2.78)	34 (94.44)
Teach	11 (30.56)	0 (0.00)	25 (69.44)
Tell	5 (13.89)	2 (5.56)	29 (80.55)
Mean (%)	7.99	2.43	89.58
Verb Type 2	N (%)		
Deliver	0 (0.00)	1 (2.78)	35 (97.22)
Donate	9 (25.00)	2 (5.56)	25 (69.44)
Explain	3 (8.33)	2 (5.56)	31 (86.11)
Express	1 (2.78)	3 (8.33)	32 (88.89)
Illustrate	1 (2.78)	2 (5.56)	33 (91.66)
Submit	0 (0.00)	1 (2.78)	35 (97.22)
Transfer	2 (5.56)	2 (5.56)	32 (88.89)
Transport	0 (0.00)	0 (0.00)	36 (100)
Mean (%)	5.56	4.51	89.93

## APPENDIX I

### Learners' Responses of English DODCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Carry	23 (63.89)	3 (8.33)	10 (27.78)
Give	4 (11.11)	1 (2.78)	31 (86.11)
Pass	5 (13.89)	2 (5.56)	29 (80.55)
Send	7 (19.44)	0 (0.00)	29 (80.56)
Ship	15 (41.67)	0 (0.00)	21 (58.33)
Show	8 (22.22)	3 (8.33)	25 (69.45)
Teach	3 (8.33)	0 (0.00)	33 (91.67)
Tell	3 (8.33)	0 (0.00)	33 (91.67)
Mean (%)	23.61	3.13	73.26
Verb Type 2	N (%)		
Deliver	23 (63.89)	4 (11.11)	9 (25.00)
Donate	18 (50.00)	4 (11.11)	14 (38.89)
Explain	16 (44.44)	5 (13.89)	15 (41.67)
Express	13 (36.11)	3 (8.33)	20 (55.56)
Illustrate	13 (36.11)	4 (11.11)	19 (52.78)
Submit	18 (50.00)	6 (16.67)	12 (33.33)
Transfer	14 (38.89)	7 (19.44)	15 (41.67)
Transport	9 (25.00)	6 (16.67)	21 (58.33)
Mean (%)	43.06	13.54	43.40

## APPENDIX J

### Native Speakers' Responses of English PDCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Carry	1 (2.78)	1 (2.78)	34 (94.44)
Give	0 (0.00)	0 (0.00)	36 (100)
Pass	0 (0.00)	6 (16.67)	30 (83.33)
Send	0 (0.00)	1 (2.78)	35 (97.22)
Ship	3 (8.33)	1 (2.78)	32 (88.89)
Show	1 (2.78)	0 (0.00)	35 (97.22)
Teach	4 (11.11)	4 (11.11)	28 (77.78)
Tell	3 (8.33)	3 (8.33)	30 (83.34)
Mean (%)	4.16	5.56	90.28
Verb Type 2	N (%)		
Deliver	0 (0.00)	0 (0.00)	36 (100)
Donate	0 (0.00)	0 (0.00)	36 (100)
Explain	0 (0.00)	1 (2.78)	35 (97.22)
Express	0 (0.00)	4 (11.11)	32 (88.89)
Illustrate	10 (27.78)	4 (11.11)	22 (61.11)
Submit	0 (0.00)	1 (2.78)	35 (97.22)
Transfer	1 (2.78)	2 (5.56)	33 (91.66)
Transport	3 (8.33)	1 (2.78)	32 (88.89)
Mean (%)	4.86	4.51	90.63

## APPENDIX K

### Native Speakers' Responses of English DODCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Carry	26 (72.22)	5 (13.89)	5 (13.89)
Give	0 (0)	0 (0)	36 (100)
Pass	0 (0.00)	2 (5.56)	34 (94.44)
Send	1 (2.78)	2 (5.56)	33 (91.66)
Ship	5 (13.89)	2 (5.56)	29 (80.55)
Show	1 (2.78)	4 (11.11)	31 (86.11)
Teach	1 (2.78)	0 (0.00)	35 (97.22)
Tell	0 (0)	1 (2.78)	35 (97.22)
Mean (%)	11.80	5.56	82.64
Verb Type 2	N (%)		
Deliver	25 (69.44)	5 (13.89)	6 (16.67)
Donate	18 (50.00)	3 (8.33)	15 (41.67)
Explain	3 (8.33)	1 (2.78)	32 (88.89)
Express	1 (2.78)	1 (2.78)	34 (94.44)
Illustrate	3 (8.33)	3 (8.33)	30 (83.34)
Submit	6 (16.67)	5 (13.89)	25 (69.44)
Transfer	24 (66.67)	4 (11.11)	8 (22.22)
Transport	4 (11.11)	6 (16.67)	26 (72.22)
Mean (%)	29.17	9.72	61.11

## APPENDIX L

### Learners' Responses of English PBCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Build	3 (8.33)	0 (0)	33 (91.67)
Buy	0 (0)	0 (0)	36 (100)
Earn	0 (0)	1 (2.78)	35 (97.22)
Gain	3 (8.33)	1 (2.78)	32 (88.89)
Get	6 (16.67)	2 (5.56)	28 (77.77)
Make	0 (0)	0 (0)	36 (100)
Win	3 (8.33)	3 (8.33)	30 (83.34)
Write	4 (11.11)	0 (0)	32 (88.89)
Mean (%)	6.60	2.43	90.97
Verb Type 2	N (%)		
Collect	3 (8.33)	10 (27.78)	23 (63.89)
Compose	0 (0)	0 (0)	36 (100)
Construct	3 (8.33)	2 (5.56)	31 (86.11)
Create	2 (5.56)	1 (2.78)	33 (91.66)
Obtain	7 (19.44)	4 (11.11)	25 (69.45)
Purchase	0 (0)	1 (2.78)	35 (97.22)
Receive	8 (22.22)	2 (5.56)	26 (72.22)
Recover	6 (16.67)	5 (13.89)	25 (69.44)
Mean (%)	10.07	8.68	81.25

## APPENDIX M

### Learners' Responses of English DOBCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Build	14 (38.89)	8 (22.22)	14 (38.89)
Buy	8 (22.22)	1 (2.78)	27 (75.00)
Earn	20 (55.56)	7 (19.44)	9 (25.00)
Gain	23 (63.89)	4 (11.11)	9 (25.00)
Get	14 (38.89)	4 (11.11)	18 (50.00)
Make	14 (38.89)	4 (11.11)	18 (50.00)
Win	26 (72.22)	2 (5.56)	8 (22.22)
Write	15 (41.67)	5 (13.89)	16 (44.44)
Mean (%)	46.53	12.15	41.32
Verb Type 2	N (%)		
Collect	6 (16.67)	7 (19.44)	23 (63.89)
Compose	12 (33.33)	6 (16.67)	18 (50.00)
Construct	10 (27.78)	7 (19.44)	19 (52.78)
Create	6 (16.67)	2 (5.56)	28 (77.77)
Obtain	6 (16.67)	5 (13.89)	25 (69.44)
Purchase	19 (52.77)	2 (5.56)	15 (41.67)
Receive	4 (11.11)	14 (38.89)	18 (50.00)
Recover	8 (22.22)	7 (19.44)	21 (58.34)
Mean (%)	24.65	17.36	57.99



## APPENDIX N

### Native Speakers' Responses of English PBCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Build	0 (0)	0 (0)	36 (100)
Buy	0 (0)	1 (2.78)	35 (97.22)
Earn	13 (36.11)	6 (16.67)	17 (47.22)
Gain	6 (16.67)	8 (22.22)	22 (61.11)
Get	5 (13.89)	1 (2.78)	30 (83.33)
Make	0 (0)	1 (2.78)	35 (97.22)
Win	0 (0)	1 (2.78)	35 (97.22)
Write	2 (5.56)	11 (30.56)	23 (63.88)
Mean (%)	9.03	10.07	80.90
Verb Type 2	N (%)		
Collect	0 (0)	0 (0)	36 (100)
Compose	0 (0)	0 (0)	36 (100)
Construct	2 (5.56)	5 (13.89)	29 (80.55)
Create	2 (5.56)	2 (5.56)	32 (88.88)
Obtain	1 (2.78)	4 (11.11)	31 (86.11)
Purchase	0 (0)	2 (5.56)	34 (94.44)
Receive	6 (16.67)	5 (13.89)	25 (69.44)
Recover	5 (13.89)	2 (5.56)	29 (80.55)
Mean (%)	5.56	6.94	87.50

## APPENDIX O

### Native Speakers' Responses of English DOBCs

	Unacceptable	Neither unacceptable nor acceptable	Acceptable
Verb Type 1	N (%)		
Build	0 (0)	1 (2.78)	35 (97.22)
Buy	2 (5.56)	15 (41.67)	19 (52.77)
Earn	26 (72.22)	2 (5.56)	8 (22.22)
Gain	21 (58.34)	7 (19.44)	8 (22.22)
Get	3 (8.33)	1 (2.78)	32 (88.89)
Make	8 (22.22)	5 (13.89)	23 (63.89)
Win	7 (19.44)	7 (19.44)	22 (61.12)
Write	1 (2.78)	2 (5.56)	33 (91.66)
Mean (%)	23.61	13.89	62.50
Verb Type 2	N (%)		
Collect	7 (19.44)	1 (2.78)	28 (77.78)
Compose	26 (72.22)	5 (13.89)	5 (13.89)
Construct	16 (44.44)	3 (8.33)	17 (47.23)
Create	3 (8.33)	3 (8.33)	30 (83.34)
Obtain	10 (27.78)	5 (13.89)	21 (58.33)
Purchase	28 (77.78)	3 (8.33)	5 (13.89)
Receive	1 (2.78)	0 (0)	35 (97.22)
Recover	0 (0.00)	2 (5.56)	34 (94.44)
Mean (%)	31.60	7.64	60.76

## APPENDIX P

### Learners' Responses of English FOCs

	Unacceptable	Neither unacceptable nor	Acceptable
Verb Type 1	N (%)		
Brush	4 (11.11)	1 (2.78)	31 (86.11)
Load	1 (2.78)	1 (2.78)	34 (94.44)
Hang	2 (5.56)	3 (8.33)	31 (86.11)
Pack	8 (22.22)	5 (13.89)	23 (63.89)
Plant	0 (0)	0 (0)	36 (100)
Spray	1 (2.78)	1 (2.78)	34 (94.44)
Spread	1 (2.78)	1 (2.78)	34 (94.44)
Wrap	3 (8.33)	1 (2.78)	32 (88.89)
Mean (%)	6.95	4.51	88.54
Verb Type 2	N (%)		
Arrange	1 (2.78)	0 (0)	35 (97.22)
Drip	3 (8.33)	0 (0)	33 (91.67)
Install	11 (30.56)	3 (8.33)	22 (61.11)
Lay	0 (0)	1 (2.78)	35 (97.22)
Lift	3 (8.33)	1 (2.78)	32 (88.89)
Pour	1 (2.78)	1 (2.78)	34 (94.44)
Put	0 (0)	0 (0)	36 (100)
Spill	2 (5.56)	1 (2.78)	33 (91.66)
Mean (%)	7.29	2.43	90.28
Verb Type 3	N (%)		
Contaminate	15 (41.66)	2 (5.56)	19 (52.78)
Cover	21 (58.33)	4 (11.11)	11 (30.56)

Decorate	31	(86.11)	1	(2.78)	4	(11.11)
Fill	27	(75.00)	3	(8.33)	6	(16.67)
Flood	16	(44.44)	10	(27.78)	10	(27.78)
Pollute	12	(33.33)	5	(13.89)	19	(52.78)
Soak	23	(63.89)	7	(19.44)	6	(16.67)
Surround	16	(44.44)	7	(19.44)	13	(36.12)
Mean (%)	55.90		13.54		30.56	

## APPENDIX Q

### Learners' Responses of English GOCs

	Unacceptable		Neither unacceptable nor acceptable		Acceptable	
Verb Type 1	N (%)					
Brush	9	(25.00)	4	(11.11)	23	(63.89)
Load	14	(38.89)	9	(25)	13	(36.11)
Hang	4	(11.11)	7	(19.44)	25	(69.45)
Pack	11	(30.56)	5	(13.89)	20	(55.55)
Plant	15	(41.67)	4	(11.11)	17	(47.22)
Spray	9	(25.00)	1	(2.78)	26	(72.22)
Spread	14	(38.89)	2	(5.56)	20	(55.55)
Wrap	2	(5.56)	0	(0)	34	(94.44)
Mean (%)	27.08		11.11		61.81	
Verb Type 2	N (%)					
Arrange	10	(27.78)	2	(5.56)	24	(66.66)
Drip	17	(47.22)	4	(11.11)	15	(41.67)
Install	23	(63.88)	2	(5.56)	11	(30.56)
Lay	6	(16.67)	5	(13.89)	25	(69.44)
Lift	14	(38.89)	7	(19.44)	15	(41.67)
Pour	13	(36.11)	3	(8.33)	20	(55.56)
Put	7	(19.45)	4	(11.11)	25	(69.44)
Spill	19	(52.78)	3	(8.33)	14	(38.89)
Mean (%)	37.85		10.41		51.74	
Verb Type 3	N (%)					
Contaminate	2	(5.56)	1	(2.78)	33	(91.66)
Cover	0	(0)	0	(0)	36	(100)

Decorate	1	(2.78)	1	(2.78)	34	(94.44)
Fill	5	(13.89)	10	(27.78)	21	(58.33)
Flood	2	(5.56)	0	(0)	34	(94.44)
Pollute	3	(8.33)	2	(5.56)	31	(86.11)
Soak	8	(22.22)	2	(5.56)	26	(72.22)
Surround	3	(8.33)	4	(11.11)	29	(80.56)
Mean (%)	8.33		6.95		84.72	

## APPENDIX R

### Native Speakers' Responses of English FOCs

	Unacceptable		Neither unacceptable nor acceptable		Acceptable	
Verb Type 1	N (%)					
Brush	0	(0)	3	(8.33)	33	(91.67)
Load	0	(0)	0	(0)	36	(100)
Hang	2	(5.56)	0	(0)	34	(94.44)
Pack	2	(5.56)	2	(5.56)	32	(88.88)
Plant	0	(0)	0	(0)	36	(100)
Spray	1	(2.78)	2	(5.56)	33	(91.66)
Spread	0	(0)	0	(0)	36	(100)
Wrap	0	(0)	0	(0)	36	(100)
Mean (%)	1.74		2.43		95.83	
Verb Type 2	N (%)					
Arrange	3	(8.33)	0	(0)	33	(91.67)
Drip	1	(2.78)	3	(8.33)	32	(88.89)
Install	0	(0)	0	(0)	36	(100)
Lay	1	(2.78)	0	(0)	35	(97.22)
Lift	1	(2.78)	5	(13.89)	30	(83.33)
Pour	1	(2.78)	0	(0)	35	(97.22)
Put	0	(0)	2	(5.56)	34	(94.44)
Spill	2	(5.56)	0	(0)	34	(94.44)
Mean (%)	3.13		3.47		93.40	
Verb Type 3						
Contaminate	4	(11.11)	1	(2.78)	31	(86.11)
Cover	7	(19.44)	6	(16.67)	23	(63.89)

Decorate	8	(22.22)	5	(13.89)	23	(63.89)
Fill	17	(47.23)	3	(8.33)	16	(44.44)
Flood	7	(19.44)	6	(16.67)	23	(63.89)
Pollute	1	(2.78)	4	(11.11)	31	(86.11)
Soak	7	(19.44)	6	(16.67)	23	(63.89)
Surround	5	(13.89)	1	(2.78)	30	(83.33)
Mean (%)	19.44		11.12		69.44	



## APPENDIX S

### Native Speakers' Responses of English GOCs

	Unacceptable		Neither unacceptable nor acceptable		Acceptable	
Verb Type 1	N (%)					
Brush	4	(11.11)	2	(5.56)	30	(83.33)
Load	28	(77.78)	3	(8.33)	5	(13.89)
Hang	0	(0)	0	(0)	36	(100)
Pack	0	(0)	0	(0)	36	(100)
Plant	11	(30.56)	6	(16.67)	19	(52.77)
Spray	0	(0)	1	(2.78)	35	(97.22)
Spread	16	(44.44)	4	(11.12)	16	(44.44)
Wrap	1	(2.78)	2	(5.56)	33	(91.66)
Mean (%)	20.83		6.25		72.92	
Verb Type 2	N (%)					
Arrange	4	(11.11)	4	(11.11)	28	(77.78)
Drip	2	(5.56)	2	(5.56)	32	(88.88)
Install	7	(19.44)	3	(8.33)	26	(72.23)
Lay	12	(33.33)	5	(13.89)	19	(52.78)
Lift	11	(30.56)	4	(11.11)	21	(58.33)
Pour	2	(5.56)	3	(8.33)	31	(86.11)
Put	1	(2.78)	1	(2.78)	34	(94.44)
Spill	1	(2.78)	1	(2.78)	34	(94.44)
Mean (%)	13.89		7.99		78.12	
Verb Type 3						
Contaminate	0	(0)	3	(8.33)	33	(91.67)
Cover	1	(2.78)	0	(0)	35	(97.22)

Decorate	0	(0)	0	(0)	36	(100)
Fill	0	(0)	0	(0)	36	(100)
Flood	9	(25)	8	(22.22)	19	(52.78)
Pollute	5	(13.89)	1	(2.78)	30	(83.33)
Soak	3	(8.33)	3	(8.33)	30	(83.34)
Surround	7	(19.44)	6	(16.67)	23	(63.89)
Mean (%)	8.68		7.29		84.03	

## APPENDIX T

### Comparisons of Ratings between PDCs and DODCs in L1

#### Vietnamese

Parameter	Estimate	Sig.	95% CI	
			Lower Bound	Upper Bound
Verb Type 1				
Intercept	4.375	.000	4.222	4.528
PDCs	-.101	.155	-.240	.038
Verb Type 2				
Intercept	3.740	.000	3.545	3.934
PDCs	.448	.000	.273	.623

## APPENDIX U

### Consent Forms



University of Southern  
Queensland

### Participant Information Sheet for USQ Research Project (For Vietnamese participants)

#### Project Details

Title of Project: **The acquisition of argument structure alternations by Vietnamese learners of English**

Human Research Ethics Approval  
Number: H19REA260

#### Research Team Contact Details

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**Description**

This project is being undertaken as part of Dung Duc Chau's PhD research. It aims to understand how Vietnamese learners acquire English as a foreign language. The participants to be recruited 36 students from the Department of English, Hue University of Foreign Languages.

**Participation**

First, you will be required to take an English language-proficiency test lasting 30 minutes, and a vocabulary test lasting 15 minutes. If your level of proficiency in English is assessed as unsuitable for this project, you will not be required to do anything more in the project. If your level of proficiency in English is deemed suitable for this project, you will then be required to complete a questionnaire that will take 5 minutes of your time, plus three experimental tasks. In total, these tasks will take approximately 90-120 minutes of your time.

The proficiency test and experimental tasks are mainly concerned with English grammar. Items in the questionnaire will include: "How old were you when you started learning English?". You are not permitted to use reference materials of any kind during the test and experimental tasks. The test and experimental tasks will be conducted in a quiet location in Hue City. They will take place at a time and venue that are convenient for you. Before the test and experimental tasks, the researcher will give you some instructions, and address any queries that you may have. He will not be present in the room during these sessions.

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to. You are free to stop doing the test or the experimental tasks at any time. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. You may also request that any data collected from you be destroyed. If you do wish to withdraw from this project or withdraw data collected from you, please contact the Research Team (contact details at the top of this form).

Before you agree to participate, you may seek advice regarding the details of the project or your decision to participate. Whether or not you decide to take part or

withdraw will in no way impact your current or future relationship with Hue University of Foreign Languages or the University of Southern Queensland.

### **Expected Benefits**

It is expected that this project will directly benefit you. First, it will provide you with the opportunity to use your knowledge of English. You will receive approximately VND 50,000 on completion of the placement test and a vocabulary test. In addition, if your test result meets the requirement of the project, you will also receive a gift voucher of VND 200,000 on completion of the three experimental tasks. (You will not receive a voucher unless you complete all three tasks.)

### **Risks**

There are minimal risks associated with your participation in this project. These include:

- (i) a risk that you will feel that your personal worth is being devalued if you are deemed unsuitable for inclusion in the project;
- (ii) a risk that you will feel obliged to participate in the project because of the difference in social status between the first investigator and you;
- (iii) a risk that you will become fatigued by having to do an English language-proficiency test, fill in a questionnaire, and do three experimental tasks lasting a total of approximately 120 minutes; and
- (iv) a risk of miscommunication between the research team and you.

For (i), if you are deemed unsuitable, this does not imply any devaluation of your personal worth. It simply means that your English proficiency is not at the right level for the project.

For (ii), we will ensure that you do not feel obliged to participate. We will do this using the consent forms associated with the questionnaire plus the experimental tasks.

For (iii), we will ensure that you do not become fatigued. We will do this by trying to schedule a 20-minute break after each task.

For (iv), as the chief investigator himself is Vietnamese, we anticipate that the research team will be able to deal effectively with you.

### **Other information**

The project will be carried out in accordance with the National Statement on Ethical Conduct in Human Research. All comments and responses will be treated confidentially unless required by law. As experimental tasks will be used in this project, please note the following:

- you may decline to have your data used for in the future for other research in the area of second language acquisition;
- a copy of the ‘results’ section of any publication based on the findings of this project (in future academic publications and in a doctoral thesis) can be sent to you upon request;
- only the research team will have access to the data; and
- it is not possible to participate in the project without doing the proficiency test and the tasks.

Only the principal investigator and the two supervisors will be able to access this data. Digital data collected as a part of this project will be stored on <https://cloudstor.aarnet.edu.au> securely. Non-digital data will be stored on an external hard drive with password protection. The storage of this data will meet the security requirements in the University of Southern Queensland’s Research Data Management policy.

### **Consent to Participate**

We would like you to sign a written consent form (enclosed) to confirm your agreement to participate in this project. Please return your signed consent form to Dung Duc Chau prior to participating in the proficiency test.

### **Questions or Further Information about the Project**

Please refer to the Research Team Contact Details at the top of the form to have any questions answered, or to request further information about this project.

**Concerns or Complaints Regarding the Conduct of the Project**

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on +61 7 4631 1839 or email [researchintegrity@usq.edu.au](mailto:researchintegrity@usq.edu.au). The Manager of Research Integrity and Ethics is not connected with the research project, and can facilitate a resolution to your concern in an unbiased manner.

Thank you for taking the time to help with this research project!





# University of Southern Queensland

## Participant Information Sheet for

### USQ Research Project

(For Native-English-speaking participants)

#### Project Details

Title of Project: **The acquisition of argument structure alternations by Vietnamese learners of English**

Human Research Ethics Approval

Number: H19REA260

#### Research Team Contact Details

##### Principal Investigator Details

Mr. Dung Duc Chau

Email: u1109520@uqmail.usq.edu.au

Mobile: +61 424 642 308 (Australia)  
+84 905 939 519 (Vietnam)

##### Supervisor Details

1. Dr. Gavin Austin

(principal supervisor)

Email: Gavin.Austin@usq.edu.au

Telephone: +61 7 4631 1934

2. Professor Shirley O'Neill

(associate supervisor)

Email: Shirley.ONeill@usq.edu.au

Telephone: +61 7 3470 4513

#### Description

Description This project is being undertaken as part of Dung Duc Chau's PhD research. It aims to understand how Vietnamese learners acquire English as a foreign language. In addition to Vietnamese learners, we need to recruit some native speakers of English. The research team requests your assistance because this project cannot be

completed without experimental task data and demographic information from native speakers of English.

### **Participation**

First, you will be required to complete a questionnaire that will take 5 minutes of your time, plus an experimental task divided into two parts. In total, the questionnaire plus the experimental task will take approximately 60-90 minutes of your time. Items in the questionnaire will be concerned with your demographic information and the experimental task is about English grammar.

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to. You are free to stop doing the questionnaire or the experimental task at any time. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. You may also request that any data collected from you be destroyed. If you do wish to withdraw from this project or withdraw data collected from you, please contact the Research Team (contact details at the top of this page).

Before you agree to participate, you may seek advice regarding the details of the project or your decision to participate. Whether or not you decide to take part or withdraw will in no way impact your current or future relationship with the University of Southern Queensland.

### **Expected Benefits**

On completion of the whole experimental task, you will receive a gift voucher for AU\$40. (You will not receive a voucher for any amount unless you complete the task.)

### **Risks**

There are minimal risks associated with your participation in this project. These include:

- (i) a risk that you will feel that your personal worth is being devalued if you are deemed unsuitable for inclusion in the project;

- (ii) a risk that you will feel obliged to participate in the project because of the difference in social status between the first investigator and you;
- (iii) a risk that you will become fatigued by having to do an English language-proficiency test, fill in a questionnaire, and do three experimental tasks lasting a total of approximately 60-90 minutes; and
- (iv) a risk of miscommunication between the research team and you.

For (i), will ensure that you do not feel obliged to participate. We will do this using the consent form associated with the questionnaire plus the experimental task.

For (ii), we will ensure that you do not become fatigued. We will do this by trying to schedule a 20-minute break after the first part of the task.

#### **Other information**

The project will be carried out in accordance with the National Statement on Ethical Conduct in Human Research. All comments and responses will be treated confidentially unless required by law. As experimental tasks will be used in this project, please note the following:

- you may decline to have your data used for in the future for other research in the area of second language acquisition;
- a copy of the ‘results’ section of any publication based on the findings of this project (in future academic publications and in a doctoral thesis) can be sent to you upon request;
- only the research team will have access to the data; and
- it is not possible to participate in the project without doing the proficiency test and the tasks.

Only the principal investigator and the two supervisors will be able to access this data. Digital data collected as a part of this project will be stored on <https://cloudstor.aarnet.edu.au> securely. Non-digital data will be stored on an external hard drive with password protection. The storage of this data will meet the security requirements in the University of Southern Queensland’s Research Data Management policy.

**Consent to Participate**

We would like you to sign a written consent form (enclosed) to confirm your agreement to participate in this project. Please return your signed consent form to Dung Duc Chau prior to participating in the proficiency test.

**Questions or Further Information about the Project**

Please refer to the Research Team Contact Details at the top of the form to have any questions answered, or to request further information about this project.

**Concerns or Complaints Regarding the Conduct of the Project**

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on +61 7 4631 1839 or email [researchintegrity@usq.edu.au](mailto:researchintegrity@usq.edu.au). The Manager of Research Integrity and Ethics is not connected with the research project, and can facilitate a resolution to your concern in an unbiased manner.

Thank you for taking the time to help with this research project!



## University of Southern Queensland

### Consent Form for USQ Research Project

(For Vietnamese participants)

#### Project Details

Title of Project: **The acquisition of argument structure alternations by Vietnamese learners of English**

Human Research Ethics Approval

Number: H19REA260

#### Research Team Contact Details

##### Principal Investigator Details

Mr. Dung Duc Chau

Email: u1109520@uqmail.usq.edu.au

Mobile: +61 424 642 308 (Australia)  
+84 905 939 519 (Vietnam)

##### Supervisor Details

1. Dr. Gavin Austin

(principal supervisor)

Email: Gavin.Austin@usq.edu.au

Telephone: +61 7 4631 1934

2. Professor Shirley O'Neill

(associate supervisor)

Email: Shirley.ONeill@usq.edu.au

Telephone: +61 7 3470 4513

#### Statement of Consent

**By signing below, you are indicating that you:**

- Have read and understood the information document regarding this project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions, you can contact the research team.

- Understand that you will not be provided with a copy of your data for your perusal and endorsement prior to inclusion of your data in the project.
- Understand that you are free to withdraw at any time, without comment or penalty.
- Understand that you can contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email [ethics@usq.edu.au](mailto:ethics@usq.edu.au) if you do have any concern or complaint about the ethical conduct of this project.
- Are at least 18 years of age.
- Consent to your data being used for future research projects in the area of second language acquisition.

If you **do not want** your data used for future research projects, please initial here:

.....

- Agree to participate in:

Test: ☐ Yes ☐ No

Demographic questionnaire: ☐ Yes ☐ No

Experimental tasks: ☐ Yes ☐ No

Participant Name

Participant Signature

Date



# University of Southern Queensland

## Consent Form for USQ Research Project

(For native-English-speaking participants)

### Project Details

Title of Project: **The acquisition of argument structure alternations by Vietnamese learners of English**

Human Research Ethics Approval  
Number: H19REA260

### Research Team Contact Details

#### Principal Investigator Details

Mr. Dung Duc Chau

Email: u1109520@uqmail.usq.edu.au

Mobile: +61 424 642 308 (Australia)  
+84 905 939 519 (Vietnam)

#### Supervisor Details

1. Dr. Gavin Austin

(principal supervisor)

Email: Gavin.Austin@usq.edu.au

Telephone: +61 7 4631 1934

2. Professor Shirley O'Neill

(associate supervisor)

Email: Shirley.ONeill@usq.edu.au

Telephone: +61 7 3470 4513

### Statement of Consent

**By signing below, you are indicating that you:**

- Have read and understood the information document regarding this project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions, you can contact the research team.

- Understand that you will not be provided with a copy of your data for your perusal and endorsement prior to inclusion of your data in the project.
- Understand that you are free to withdraw at any time, without comment or penalty.
- Understand that you can contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email [ethics@usq.edu.au](mailto:ethics@usq.edu.au) if you do have any concern or complaint about the ethical conduct of this project.
- Are at least 18 years of age.
- Consent to your data being used for future research projects in the area of second language acquisition.

If you **do not want** your data used for future research projects, please initial here:

.....

- Agree to participate in:
 

Demographic questionnaire:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Experimental tasks:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Participant Name

Participant Signature

Date



## APPENDIX V

### Demographic Questionnaire (For Vietnamese Participants)

1. Please provide the following information:

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Gender:   Male   Female   Other

2. How many years and months have you been learning English? \_\_ years \_\_ months

3. Have you ever lived in an English-speaking country for a month or more? If so, indicate where, for how long, and how old you were, plus the circumstances of your stay (e.g., school, homestay, working holiday). (If you have lived overseas for more than three periods, choose the three longest ones.)

#### Visit 1

Where: \_\_\_\_\_

For how long: \_\_\_\_\_

How old were you (age range in years): \_\_\_\_\_

Circumstances: \_\_\_\_\_

#### Visit 2

Where: \_\_\_\_\_

For how long: \_\_\_\_\_

How old were you (age range in years): \_\_\_\_\_

Circumstances: \_\_\_\_\_

**Visit 3**

Where: \_\_\_\_\_  
 For how long: \_\_\_\_\_  
 How old were you (age range in years): \_\_\_\_\_  
 Circumstances: \_\_\_\_\_

4. Are you proficient in any foreign language(s) other than English? Yes No

If 'yes': Which foreign languages? In your opinion, how proficient are you in each language (circle)? (If you are proficient in more than three foreign languages, choose the three that you are most proficient in.)

Language 1: \_\_\_\_\_  
 Proficiency level : Elementary / Intermediate / Advanced

Language 2 : \_\_\_\_\_  
 Proficiency level: Elementary / Intermediate/ Advanced

Language 3: \_\_\_\_\_  
 Proficiency level: Elementary / Intermediate/ Advanced

5. Have you ever taken any International English Language tests (e.g., IELTS, TOEFL, TOEIC, CEFR: B1, B2)? Yes No

If 'yes', which test ? When did you take the test? And what was the result? If you have taken one test multiple times, write the test score that you achieved on the most recent occasion.

Test 1 \_\_\_\_\_ Year \_\_\_\_\_ Result \_\_\_\_\_  
 Test 2 \_\_\_\_\_ Year \_\_\_\_\_ Result \_\_\_\_\_  
 Test 3 \_\_\_\_\_ Year \_\_\_\_\_ Result \_\_\_\_\_

**Demographic Questionnaire**  
**(For Native-English-Speaking Participants)**

1. Please provide the following information:

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Gender: Male Female Other

2. Are you proficient in any foreign language(s) other than English? Yes No

If 'Yes': Which foreign languages? In your opinion, how proficient are you in each language (circle)? (If you are proficient in more than three foreign languages, choose the three that you are most proficient in.)

Language 1: \_\_\_\_\_

Proficiency level : Elementary / Intermediate / Advanced

Language 2 : \_\_\_\_\_

Proficiency level: Elementary / Intermediate / Advanced

Language 3: \_\_\_\_\_

Proficiency level: Elementary / Intermediate / Advanced